

# Annual Environmental Report 2014

<b>Agglomeration Name:</b>	<b>Athboy</b>
<b>Licence Register No.</b>	<b>D0124-01</b>



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## **Section 1    Executive Summary and Introduction to the 2014 AER**

### ***1.1 Summary Report on 2014***

This Annual Environmental Report (AER) has been prepared in accordance with EPA Licence D0124-01, governing Athboy WWTP and associated discharges, in Athboy, County Meath.

Specified assessments are included as an appendix to the AER as follows:

- Storm water overflow assessment
- Priority substances assessment
- Drinking water risk assessment

The agglomeration is served by a wastewater treatment plant with a Design PE of 5,800. The treatment process includes the following:-

- preliminary treatment (including screening / grit removal)
- primary treatment
- secondary treatment - sequence batch reactors.
- chemical dosing for phosphorus removal

The final effluent from the primary discharge point was compliant with the emission limit values in 2014.

290,922 kilograms of sludge (as kgs dry solids) was removed from the wastewater treatment plant in 2014 as dewatered sludge cake. De-watered sludge was transferred to Bellewstown for disposal.

There was no major capital or operational changes undertaken in 2014.

An Annual Statement of Measures for 2015 is included in Appendix 7.1.

## Section 2 Monitoring Reports Summary

### 2.1 Summary report on monthly influent monitoring

Table 2.1 - Influent Monitoring Summary

	BOD (mg/l)	COD (mg/l)	SS (mg/l)	TP (mg/l)	TN (mg/l)	NH <sub>4</sub> (mg/l)	Hydraulic Loading (m <sup>3</sup> /d)	Organic Loading (PE/day)
Number of Samples	9	10	10	11	10	3		
Annual Max.	230.53	538	762	7.81	53.2	38.9	3,700	2,406
Annual Mean	58.0	232.91	124.26	4.10	22.49	4.037	1,290	1,776

#### Significance of results

The annual mean hydraulic loading is less than the treatment plant capacity as detailed further in Section 3.2.

The annual maximum organic loading is less than the treatment plant capacity as detailed further in Section 3.2.

The design of the wastewater treatment plant allows for peak values and therefore the peak loads have not impacted on compliance with emission limit values.

## 2.2 Discharges from the agglomeration

**Table 2.2 - Effluent Monitoring Summary**

	<b>BOD (mg/l)</b>	<b>COD (mg/l)</b>	<b>TSS (mg/l)</b>	<b>Total P (mg/l)</b>	<b>Ortho P (mg/l)</b>	<b>Total N (mg/l)</b>	<b>NH<sub>4</sub> (mg/l)</b>	<b>Comment</b>
<b>WWDL ELV (Schedule A)</b>	20	125	35	1	0.6	N/A	1.1	
<b>ELV with Condition 2 Interpretation included</b>	40	250	87.5	1.2	1.2	N/A	2.2	
<b>Number of sample results</b>	10	11	11	12	12	11	12	
<b>Number of sample results above WWDL ELV</b>	0	0	0	0	0	N/A	0	
<b>Number of sample results above ELV with Condition 2 Interpretation included</b>	0	0	0	0	0	N/A	0	
<b>Annual Mean (for parameters where a mean ELV applies)</b>	5.16	21	8.4	0.465	0.362	14.6	0.34	
<b>Overall Compliance (Pass/Fail)</b>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	

### Significance of results

The WWTP was compliant with the ELVs set in the wastewater discharge licence. The impact on receiving waters is assessed further in Section 2.3.

## 2.3 Ambient monitoring summary

**Table 2.3 - Ambient Monitoring Report Summary**

Ambient Monitoring Point from WWDL (or as agreed with EPA)	<i>Irish Grid Reference</i>	EPA Feature Coding Tool code	Current EQS Status	Does assessment of the ambient monitoring results indicate that the discharge is impacting on water quality?
Upstream monitoring point	271818,264149	aSW-1u	Moderate	No
Downstream monitoring point	272476,263261	aSW-1d	Moderate	No

The results for the upstream and downstream monitoring are included in Appendix 7.2.

### Significance of results

The Athboy WWTP was compliant with the ELVs set in the wastewater discharge licence as detailed in Section 2.2.

The discharge from the wastewater treatment plant does not appear to have an impact on the water quality status.

## 2.4 Data collection and reporting requirements under the Urban Waste Water Treatment Directive

The electronic submission of data was completed by 26<sup>th</sup> February 2015.

## 2.5 Pollutant Release and Transfer Register (PRTR) - 2014

The printed PRTR summary sheets are included in Appendix 7.3.

## Section 3 Operational Reports Summary

### 3.1 Treatment Efficiency Report

A summary presentation of the efficiency of the treatment process including information for all the parameters specified in the licence is included below:-

**Table 3.1 - Treatment Efficiency Report Summary**

	cBOD (kg/yr)	COD (kg/yr)	SS (kg/yr)	Total P (kg/yr)	Total N (kg/yr)	Ammonia (kg/yr)	Comment
Influent mass loading (kg/year)	27,300	109,676	58,518	1,932	10,588	1,900	
Effluent mass emission (kg/year)	502.2	4,737	695.2	49.5	2,196	49.7	
% Efficiency (% reduction of influent load)	98.71%	95.4%	99.14%	96.85%	80.22%	98.16%	

### 3.2 Treatment Capacity Report

**Table 3.2 - Treatment Capacity Report Summary**

Hydraulic Capacity – Design / As Constructed (m <sup>3</sup> /year) Peak	1,428,975
Hydraulic Capacity – Design / As Constructed (m <sup>3</sup> /year) DWF	476,325
Hydraulic Capacity – Current loading (m <sup>3</sup> /year)	470,896
Hydraulic Capacity – Remaining (m <sup>3</sup> /year)	958,079
Organic Capacity - Design / As Constructed (PE)	5,800
Organic Capacity - Current loading (PE)	1,776
Organic Capacity – Remaining (PE)	4,024
Will the capacity be exceeded in the next three years? (Yes / No)	No

### 3.3 Extent of Agglomeration Summary Report

In this section Irish Water is required to report on the amount of urban waste water generated within the agglomeration. It does not include any waste water collected and treated in a private system and discharged to water under a Section 4 Licence issued under the Water Pollution Acts 1977 (as amended):

**Table 3.3 - Extent of Agglomeration Summary Report**

	% of p.e. load generated in the agglomeration
Load generated in the agglomeration that is collected in the sewer network	100%
Load collected in the agglomeration that enters treatment plant	100%
Load collected in the sewer network but discharged without treatment	0%

**Load generated in the agglomeration that is collected in the sewer network** is the total load generated and collected in the municipal network within the boundary of the agglomeration.

**Load collected in the agglomerations that enters treatment plant** is that portion of the previous figure which enters the waste water treatment plant

**Load collected but discharged without treatment** is that portion of the first figure which is discharged without treatment.

The data in Table 3.3 above is based on influent monitoring as detailed in Section 2.1 above.

### 3.4 Complaints Summary

A summary of complaints of an environmental nature is included below.

**Table 3.4 - Complaints Summary Table:**

Number	Date & Time	Nature of Complaint	Cause of Complaint	Actions taken to resolve issue	Closed (Y/N)
1	14/11/2014	Flooding	Heavy Rainfall		Yes



### 3.5 Reported Incidents Summary

A summary of reported incidents is included below.

**Table 3.5.1 - Summary of Incidents**

Incident Type (e.g. Non-compliance, Emission, spillage, Emergency Overflow Activation)	Incident Description	Cause	No. of incident	Corrective Action	Authorities Contacted Note 1	Reported to EPA (Yes/No)	Closed (Y/N)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

There were no reportable incidents recorded for this licence during the reporting period 01/01/14 to 31/12/14.

**Table 3.5.2 - Summary of Overall Incidents**

Number of Incidents in 2014	0
Number of Incidents reported to the EPA via EDEN in 2014	0
Explanation of any discrepancies between the two numbers above	N/A

### 3.6 Sludge / Other inputs to the WWTP

‘Other inputs’ to the waste water treatment plant are summarised in Table 3.6 below.

**Table 3.6 - Other Inputs**

Input type	m3/year	PE/year	% of load to WWTP	Is there a leachate/sludge acceptance procedure for the WWTP? (Y/N)	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Domestic /Septic Tank Sludge	N/A	N/A	N/A	N/A	N/A
Industrial / Commercial Sludge	N/A	N/A	N/A	N/A	N/A
Landfill Leachate (delivered by tanker)	N/A	N/A	N/A	N/A	N/A
Landfill Leachate (delivered by sewer network)	N/A	N/A	N/A	N/A	N/A
Other (specify)	N/A	N/A	N/A	N/A	N/A

Notes:

1. Other Inputs include; septic tank sludge, industrial /commercial sludge, landfill leachate and any other sludge that is collected and added to the treatment plant.
2. Sludge that is added to a dedicated sludge reception facility at a waste water treatment plant not included in Table 3.6.  
Only include sludge which is added to the waste water treatment process stream. Enter zero where there are no inputs

## Section 4. Infrastructural Assessments and Programme of Improvements

### 4.1 Storm water overflow identification and inspection report

The Storm Water Overflow Identification & Inspection Report is included in Appendix 7.4. A summary of the significance and operation is included below.

**Table 4.1.1 - SWO Identification and Inspection Summary Report**

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A3 of the WWDL	Significance of the overflow (High / Medium / Low)	Compliance with DoEHLG Criteria	No. of times activated in 2014 (No. of events)	Total volume discharged in 2014 (m <sup>3</sup> )	Total volume discharged in 2014 (P.E.)	Estimated /Measured data
SW-2	272048, 263611	Yes	Low	Compliant	1	Unknown	Unknown	N/A
Athboy Pumping Station	272048, 263611	Yes	Low	Compliant	0	Unknown	Unknown	N/A

**Table 4.1.2 - SWO Identification and Inspection Summary Report**

How much sewage was discharged via SWOs in the agglomeration in the year (m <sup>3</sup> /yr)?	23,545 m <sup>3</sup> /yr (Estimate)
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	285 (Estimate)
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2014?	5% (Estimate)
Is each SWO identified as non-compliant with <a href="#">DoEHLG Guidance</a> included in the Programme of Improvements?	N/A
The SWO assessment includes the requirements of Schedule A3	Yes
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	N/A

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

The Improvement Programme is included in Appendix 7.5.

The Improvement Programme report included in Appendix 7.5 addresses the **Specified Improvement Programmes** as detailed in Schedules C of the WWDL.

Specified Improvement Programmes (under Schedule C of WWDL)	Licence Completion Date	Date Expired (N/NA/Y)	Status of Works	% Work Completed	Time for Completing the Work	Comments
Wastewater Treatment plant construction and ancillary works	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Athboy Pumping Station (main)	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA1	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA2 (main)	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA3	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA4	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed

A summary of the status of any improvements identified under Condition 5.2 is included below.

**Improvements identified above also include measures taken** to prevent environmental damage anticipated following events or accidents/incidents associated with discharges or overflows from the waste water works and as such are considered to fulfil any Statement of Measures requirements. Refer also to Appendix 7.1 which summarises the Annual Statement of Measures.

**Table 4.2.2 - Sewer Integrity Risk Assessment Tool Summary**

The Improvement Programme should include an assessment of the integrity of the existing wastewater works for the following:	Risk Assessment Rating (High, Medium, Low)	Risk Assessment Score	Comment
Hydraulic Risk Assessment Score	Medium	67	N/A
Environmental Risk Assessment Score	Low	130	N/A
Structural Risk Assessment Score	Medium	65	N/A
Operation & Maintenance Risk Assessment Score	Low	30	N/A
<b>Overall Risk Score for the agglomeration</b>	<b>Low</b>	<b>292</b>	<b>N/A</b>

See Appendix 7.6 for the Sewer Integrity Tool Output.

## Section 5. Licence Specific Reports

**Licence Specific Reports Summary Table**

Licence Specific Report	Required in 2014 AER or outstanding from previous AER	Included in 2014 AER	Reference to relevant section of AER
Priority Substances Assessment	No	Yes	Full report in Appendix 7.7
Drinking Water Abstraction Point Risk Assessment	No	Yes	Full report in Appendix 7.8
Habitats Impact Assessment	No	No	N/A
Shellfish Impact Assessment	No	No	N/A
Pearl Mussel Report	No	No	N/A
Toxicity/Leachate Management	No	No	N/A
Toxicity of Final Effluent Report	No	No	N/A

## 5.1 Priority Substances Assessment

The Priority Substances Assessment report is included in Appendix 7.7. A summary of the findings of this report is included below.

**Table 5.1 - Priority Substance Assessment Summary**

	Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.
<b>Does the assessment use the Desk Top Study Method or Screening Analysis to determine if the discharge contains the parameters in Appendix 1 of the EPA guidance</b>	Desk Top Study and Screening Analysis
<b>Does the assessment include a review of Trade inputs to the works?</b>	No
<b>Does the assessment include a review of other inputs to the works?</b>	No
<b>Does the report include an assessment of the significance of the results where a listed material is present in the discharge? (e.g. impact on the relevant EQS standard for the receiving water)</b>	Yes
<b>Does the assessment identify that priority substances may be impacting the receiving water?</b>	No
<b>Does the Improvement Programme for the agglomeration include the elimination / reduction of all priority substances identified as having an impact on receiving water quality?</b>	No

## 5.2 Drinking Water Abstraction Point Risk Assessment.

The Drinking Water Abstraction Point Risk Assessment report is included in Appendix 7.8. A summary of the findings of this report is included below.

**Table 5.2 - Drinking Water Abstraction Point Risk Assessment Summary**

	Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.
<b>Is a Drinking Water Abstraction Risk Assessment required in the 2014 AER (or outstanding from a previous AER)</b>	No
<b>Does the Drinking Water Abstraction Risk Assessment identify whether any of the discharges in Schedule A of the licence pose a risk to a drinking water abstraction</b>	No
<b>Does the assessment identify if any other discharge(s) from the works pose a risk to a drinking water abstraction (includes emergency overflows)</b>	No
<b>What is the overall risk ranking applied by the licensee</b>	L
<b>Does the risk assessment consider the impacts of normal operation</b>	Yes
<b>Does the risk assessment consider the impacts of abnormal operation (e.g. incidents /overflows)</b>	Yes
<b>Does the risk assessment include control measures for each risk identified</b>	Yes
<b>Does the risk assessment consider operational control measures e.g? waste water incident notification to drinking water abstraction operator</b>	Yes
<b>Does the risk assessment include infrastructural control measures</b>	Yes
<b>Does the Improvement Programme for the agglomeration include control measures / corrective actions to eliminate / reduce priority substances identified as having an impact on receiving water quality?</b>	No

## Section 6 Certification and Sign Off

Table 6.1 - Summary of AER Contents

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 ( <i>insert lines as required</i> )	N/A
Is there a need to request/advise the EPA of any modifications to the existing WWDL? Refer to Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	No
List reason e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements ( <i>insert lines as required</i> )	N/A
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?	Yes
List outstanding reports ( <i>insert lines as required</i> )	N/A

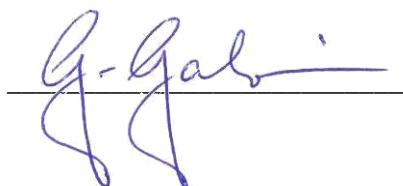
### Declaration by Irish Water

The AER contains the following;

- Introduction and background to 2014 AER
- Monitoring reports summary.
- Operational reports summary.
- Infrastructural Assessment and Programme of Improvements.
- Licence specific reports.
- Certification and Sign Off
- Appendices

I certify that to the best of my knowledge the information given in this Annual Environmental Report is truthful, accurate and complete:

Signed:



Date: 02/03/2015

**Gerry Galvin**  
Chief Technical Advisor

## Section 7. Appendix

Appendix 7.1	Annual Statements of Measures
Appendix 7.2	Ambient Monitoring Summary
Appendix 7.3	Pollutant Release and Transfer Register (PRTR) Summary Sheets
Appendix 7.4	Storm Water Overflow Assessment and Inspection Report
Appendix 7.5	Specified Improvement Programme
Appendix 7.6	Sewer Integrity Tool Output
Appendix 7.7	Priority Substances Assessment
Appendix 7.8	Drinking Water Abstraction Risk Assessment



## **Appendix 7.1**

### **Annual Statement of Measures**

No additional measures have been taken in 2014 in relation to the prevention of environmental damage. The need for measures to prevent environmental damage will be reviewed on an annual basis.

## Appendix 7.2 Ambient Monitoring Summary

Entity	Station	Station Reference	Station Easting	Station Northing	River Basin District	Water Management Unit	Sample Reference	Sample Date	Dissolved Oxygen	pH	Ammonium NH4-N	Ortho-Phosphate P	Total Nitrogen N	Biological Oxygen Demand	Dissolved Oxygen % Saturation
Athboy River	u/s Athboy WWTP	RS07A010200	271818	264149	Eastern RBD	Athboy	13-727	18-Dec-13			0.032	0.019	1.19	1.6	90.7
							14-056	19-Feb-14		7.74	0.024	0.019	1.86	1.6	91.4
							14-273	10-Jun-14			0.024	0.017		1.1	
							14-488	03-Jul-14		7.95	0.035	0.02		1.34	109.4
							14-751	19-Aug-14		7.92	0.03	0.026	1.26	0.75	92.9
							14-801	11-Sep-14	8.99	8.41	0.024	0.019	1.28	0.66	
							14-912	09-Oct-14	9.48	8.64	0.018	0.021	1.29	1.47	
							14-999	22-Oct-14	9.87	8.59	0.02	0.022	1.11	1.23	
								28-Nov-14			0.031	0.037	2.08	1.51	
								04-Dec-14			0.026	0.016	2.06	2.15	107.1
							Mean		9.447	8.208	0.026	0.022	1.516	1.341	98.300
							95%ile		9.831	8.6275	0.03365	0.03205	2.073	1.9025	108.94

Entity	Station	Station Reference	Station Easting	Station Northing	River Basin District	Water Management Unit	Sample Reference	Sample Date	Dissolved Oxygen	pH	Ammonium NH4-N	Ortho-Phosphate P	Total Nitrogen N	Biological Oxygen Demand	Dissolved Oxygen % Saturation
Athboy River	d/s Athboy WWTP	RS07A010270	272476	263261	Eastern RBD	Athboy	14-057	19-Feb-14		7.82	0.032	0.019	1.62	1.4	92.1
							14-274	10-Jun-14			0.022	0.019		1.78	
							14-489	03-Jul-14		7.98	0.024	0.017		1.76	111.1
							14-752	19-Aug-14		7.944	0.028	0.025	1.25	0.61	104
							14-802	11-Sep-14	9.88	8.48	0.016	0.016	1.48	0.6	
							14-913	09-Oct-14	9.12	8.56	0.017	0.022	1.38	0.73	
							14-1000	22-Oct-14	10.21	8.64	0.018	0.028	1.37	2.12	
								28-Nov-14			0.028	0.032	2.17	2.72	
								04-Dec-14			0.02	0.023	2.1	2.47	114.7
							Mean		9.737	8.237	0.023	0.022	1.624	1.577	105.475
							95%ile		10.177	8.62	0.0304	0.0304	2.149	2.62	114.16

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

<b>Ammonia</b>	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)
<b>Ortho P</b>	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)
<b>B.O.D.</b>	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)
<b>D.O.</b>	Lower Limit	80 % saturation (95% ile)	
	Upper Limit	120 % saturation (95% ile)	

## **Appendix 7.3**

### **Pollutant Release and Transfer Register (PRTR) Summary Sheets**



Environmental Protection Agency

[Guidance to completing the PRTR workbook](#)

# AER Returns Workbook

Version 1.1.18

<b>REFERENCE YEAR</b>	2014
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## 1. FACILITY IDENTIFICATION

Parent Company Name	Irish Water
Facility Name	Athboy Waste Water Treatment Plant
PRTR Identification Number	D0124
Licence Number	D0124-01

Classes of Activity

No.	class name
-	Refer to PRTR class activities below

Address 1	
Address 2	
Address 3	
Address 4	
	Meath
Country	Ireland
Coordinates of Location	-6.91101 53.6179
River Basin District	IEEA
NACE Code	3700
Main Economic Activity	Sewerage
AER Returns Contact Name	Niall Horgan
AER Returns Contact Email Address	nhorgan@water.ie
AER Returns Contact Position	Environmental Compliance Specialist, Irish Water
AER Returns Contact Telephone Number	01-8925396
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	463292.0
Production Volume Units	m3
Number of Installations	1
Number of Operating Hours in Year	8760
Number of Employees	1
User Feedback/Comments	
Web Address	

## 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(f)	Urban waste-water treatment plants

## 3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption?	No
If applicable which activity class applies (as per Schedule 2 of the regulations)?	
Is the reduction scheme compliance route being used?	

## 4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities)?	No
---	----

This question is only applicable if you are an IPPC or Quarry site

#### 4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : D0124 | Facility Name : Athboy Waste Water Treatment Plant | Filename : D0124\_2014.xls | Return Year : 2014 |

29/01/2015 21:54

#### SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	POLLUTANT Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
01	Methane (CH <sub>4</sub> )	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
02	Carbon monoxide (CO)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
03	Carbon dioxide (CO <sub>2</sub> )	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	-80378.0	0.0	-80378.0
05	Nitrous oxide (N <sub>2</sub> O)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
07	Non-methane volatile organic compounds (NMVOC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
08	Nitrogen oxides (NO <sub>x</sub> /NO <sub>2</sub> )	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
11	Sulphur oxides (SO <sub>x</sub> /SO <sub>2</sub> )	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

#### SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	POLLUTANT Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

#### SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs			
Pollutant No.	POLLUTANT Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

#### Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH<sub>4</sub>) emission to the environment under T (total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:

Athboy Waste Water Treatment Plant

Please enter summary data on the quantities of methane flared and / or utilised

	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
			Method Code	Designation or Description	
Total estimated methane generation (as per site model)	0.0				N/A
Methane flared	0.0				0.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A

#### 4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : D0124 | Facility Name : Athboy Waste Water Treatment Plant | Filename : D0124\_2014.xls | Return Year : 2014 |

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#### SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this

RELEASES TO WATERS									
POLLUTANT		Please enter all quantities in this section in KGs							
No. Annex II	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
34	1,2-dichloroethane (EDC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
25	Alachlor	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
26	Aldrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
61	Anthracene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0	
17	Arsenic and compounds (as As)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.263	0.263	0.0	0.0	
27	Atrazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.005	0.005	0.0	0.0	
62	Benzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.008	0.008	0.0	0.0	
91	Benzo(g,h,i)perylene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0	
63	Brominated diphenylethers (PBDE)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
18	Cadmium and compounds (as Cd)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.124	0.124	0.0	0.0	
28	Chlordane	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
29	Chlordecone	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
30	Chlorfenvinphos	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
79	Chlorides (as Cl)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	25073.363	25073.363	0.0	0.0	
31	Chloro-alkanes, C10-C13	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.097	0.097	0.0	0.0	
32	Chlorpyrifos	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
19	Chromium and compounds (as Cr)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.371	0.371	0.0	0.0	
20	Copper and compounds (as Cu)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.39	1.39	0.0	0.0	
82	Cyanides (as total CN)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.358	1.358	0.0	0.0	
33	DDT	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
70	Di-(2-ethyl hexyl) phthalate (DEHP)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.425	0.425	0.0	0.0	
35	Dichloromethane (DCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.021	0.021	0.0	0.0	
36	Dieldrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
37	Diuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.012	0.012	0.0	0.0	
38	Endosulphan	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
39	Endrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0	
65	Ethyl benzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.008	0.008	0.0	0.0	

88	Fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
83	Fluorides (as total F)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	108.874	108.874	0.0	0.0
40	Halogenated organic compounds (as AOX)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.106	1.106	0.0	0.0
41	Heptachlor	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
90	Hexabromobiphenyl	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
42	Hexachlorobenzene (HCB)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
43	Hexachlorobutadiene (HCBD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
89	Isodrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
67	Isoproturon	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.003	0.003	0.0	0.0
23	Lead and compounds (as Pb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.408	1.408	0.0	0.0
45	Lindane	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
21	Mercury and compounds (as Hg)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
46	Mirex	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
68	Naphthalene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.002	0.002	0.0	0.0
22	Nickel and compounds (as Ni)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.973	1.973	0.0	0.0
64	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.038	0.038	0.0	0.0
87	Octylphenols and Octylphenol ethoxylates	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
69	Organotin compounds (as total Sn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
48	Pentachlorobenzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
49	Pentachlorophenol (PCP)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
71	Phenols (as total C)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.421	0.421	0.0	0.0
50	Polychlorinated biphenyls (PCBs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
72	Polycyclic aromatic hydrocarbons (PAHs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.005	0.005	0.0	0.0
51	Simazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.007	0.007	0.0	0.0
52	Tetrachloroethylene (PER)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.027	0.027	0.0	0.0
53	Tetrachloromethane (TCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
73	Toluene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.229	0.229	0.0	0.0
12	Total nitrogen	M	ALT	EPA UWWTP Tool Version 5.0	2745.468	2745.468	0.0	0.0
76	Total organic carbon (TOC) (as total C or COD/3)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	4271.447	4271.447	0.0	0.0
13	Total phosphorus	M		EPA UWWTP Tool Version 5.0	56.058	56.058	0.0	0.0
59	Toxaphene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
74	Tributyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

54	Trichlorobenzenes (TCBs)(all isomers)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
57	Trichloroethylene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
77	Trifluralin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
76	Triphenyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
80	Vinyl chloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
78	Xylenes	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.054	0.054	0.0	0.0
24	Zinc and compounds (as Zn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	22.87	22.87	0.0	0.0

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

#### SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS				Please enter all quantities in this section in KGs				
POLLUTANT				QUANTITY				
No. Annex II	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

#### SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS				Please enter all quantities in this section in KGs				
POLLUTANT				QUANTITY				
Pollutant No.	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
370	Selenium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
205	Antimony (as Sb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.072	0.072	0.0	0.0
368	Molybdenum	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
358	Tin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.067	0.067	0.0	0.0
373	Barium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	6.136	6.136	0.0	0.0
374	Boron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	28.312	28.312	0.0	0.0
356	Cobalt	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.081	0.081	0.0	0.0
386	Vanadium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.264	1.264	0.0	0.0
388	Dichlobenil	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.002	0.002	0.0	0.0
383	Unuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
385	Mecoprop Total	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.05	0.05	0.0	0.0
380	2,4 Dichlorophenol (2,4 D)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.024	0.024	0.0	0.0
384	MCPA	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.041	0.041	0.0	0.0
382	Glyphosate	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.71	0.71	0.0	0.0
389	Benzo[a]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
390	Benzo[b]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0



391	Benzo[k]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
392	Indeno[1,2,3-c,d]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
393	Carbon tetrachloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
394	2,6-Dichlorobenzamide	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.037	0.037	0.0	0.0
395	Dicofol	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
396	Hexabromocyclodecane (HBCD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
397	PFOS	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
238	Ammonia (as N)	M	OTH	MCC Wastewater Lab	41.696	41.696	0.0	0.0
303	BOD	M	OTH	MCC Wastewater Lab	743.12	743.12	0.0	0.0
306	COD	M	OTH	MCC Wastewater Lab	6345.247	6345.247	0.0	0.0
362	Kjeldahl Nitrogen	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
327	Nitrate (as N)	M			2409.118	2409.118	0.0	0.0
372	Nitrite (as N)	M			40.306	40.306	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	MCC Wastewater Lab	40.77	40.77	0.0	0.0
240	Suspended Solids	M	OTH	MCC Wastewater Lab	1078.08	1078.08	0.0	0.0

\* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

**5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE**

| PRTR# : D0124 | Facility Name : Athboy Waste Water Treatment Plant | Filename : D0124\_2014.xls | Return Year : 2014 |

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Please enter all quantities on this sheet in Tonnes												11	
Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste: Name and Licence/Permit No of Next Destination Facility	Non	Haz Waste: Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste: Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer			
Within the Country	19 08 01	No	4.56	screenings sludges from treatment of urban waste	D1	M	Volume Calculation	Offsite in Ireland	Tag A Bin		City North Business Complex, Stamullen, Co. Meath		
Within the Country	19 08 05	No	1454.61	water	D2	M	Volume Calculation	Offsite in Ireland	Paddy Brady		Rosameen, Kells, Co. Meath		
Within the Country	20 03 01	No	1.2	mixed municipal waste	M		Volume Calculation	Offsite in Ireland					
Within the Country	20 01 01	No	2.2	paper and cardboard	R3	M	Volume Calculation	Offsite in Ireland					

\* Select a row by double-clicking the Description of Waste then click the delete button

## Appendix 7.4

### Storm Water Overflow Assessment

<b>NAME OF RECEIVING WATER:</b> Athboy River		<b>GIS CO -ORDINATES OF DISCHARGE:</b> E272048,N263611
<b>DISCHARGE POINT CODE:</b> SW-2		<b>PHOTOGRAPHS TAKEN:</b> NO <b>VIDEO TAKEN:</b> NO
	<b>Yes/No/ N/A</b>	<b>COMMENTS</b>
14.1 Was there evidence of the operation of the storm water overflow?	<b>No</b>	
14.2 Is there a system in place to monitor the frequency of the operation of the SWO?	<b>No</b>	
14.3 Is the SWO operating according to the criteria specified in the Procedures and Criteria in relation to Storm Water Overflows?	<b>Yes</b>	
14.4 Is the SWO causing significant visual/aesthetic impact or resulting in public complaints?	<b>No</b>	Visual inspection of river showed no indications of any deleterious impact.
14.5 Have the local authority evaluated whether there is deterioration in the water quality of the receiving water due to the operation of the SWO?	<b>Yes</b>	Please refer to Appendix 7.2 ambient monitoring results for the Athboy River
14.6 Have the local authority evaluated whether the SWO gives rise to failure to meet the requirements of national Regulations (for example, the Bathing Water Regulations)?	<b>N/A</b>	
14.7 Does the SWO operate in dry weather?	<b>No</b>	
14.8 Was there evidence of gross solids or litter in the receiving water associated with the SWO discharge resulting in an impairment of, or an interference with, amenities or the environment?	<b>No</b>	As per comment at 14.4 above.

<b>NAME OF RECEIVING WATER:</b> Athboy River		<b>GIS CO -ORDINATES OF DISCHARGE:</b> E272048,N263611
<b>DISCHARGE POINT CODE:</b> Athboy Pumping Station		<b>PHOTOGRAPHS TAKEN:</b> NO <b>VIDEO TAKEN:</b> NO
	<b>Yes/No/ N/A</b>	<b>COMMENTS</b>
14.1 Was there evidence of the operation of the storm water overflow?	<b>No</b>	
14.2 Is there a system in place to monitor the frequency of the operation of the SWO?	<b>No</b>	
14.3 Is the SWO operating according to the criteria specified in the Procedures and Criteria in relation to Storm Water Overflows?	<b>Yes</b>	
14.4 Is the SWO causing significant visual/aesthetic impact or resulting in public complaints?	<b>No</b>	Visual inspection of river showed no indications of any visual impact.
14.5 Have the local authority evaluated whether there is deterioration in the water quality of the receiving water due to the operation of the SWO?	<b>Yes</b>	Please refer to Appendix 7.2 ambient monitoring results for the Athboy River.
14.6 Have the local authority evaluated whether the SWO gives rise to failure to meet the requirements of national Regulations (for example, the Bathing Water Regulations)?	<b>N/A</b>	
14.7 Does the SWO operate in dry weather?	<b>No</b>	
14.8 Was there evidence of gross solids or litter in the receiving water associated with the SWO discharge resulting in an impairment of, or an interference with, amenities or the environment?	<b>No</b>	As per comment at 14.4 above.

## DISCHARGE POINT CODE: SW-2

Formula A	$= DWF + 1.36P + 2E$
Domestic PE	$= 5,800 \times 0.8$
	$= 4,640$
Industrial PE	$= 5,800 \times 0.2$
	$= 1,160$
P = design domestic population at SW002	$= 5,800 \text{ pe}$
E = design industrial effluent flow at SW002	$= (1,160 \text{ pe} \times 0.225 \text{ l/pe/d})$
	$= 261 \text{ m}^3/\text{day}$
DWF	$= 5,800 \times 0.225 \text{ l/pe/d}$
	$= 1,305 \text{ m}^3/\text{day}$
Formula A	$= DWF + 1.36P + 2E$
	$= 1,305 + (1.36 \times 5,800) + (2 \times 261)$
	$= 1,305 + 7,888 + 522$
	$= 9,715 \text{ m}^3/\text{day}$

The storm tank at Athboy has a capacity of  $1,100 \text{ m}^3$ . At formula A flow the storm tanks give 2.71 hours retention time.

The forward two feed pumps in the inlet chamber at Athboy are capable of delivering a combined  $600 \text{ m}^3/\text{hr}$ . Formula A flow is calculated at  $404.79 \text{ m}^3/\text{hr}$ . The forward feed pumps are capable of formula 'A' flow into treatment.

Therefore SW002 is fully compliant with the DoEHLG "Procedures and Criteria for Storm Water Overflows", 1995.

## DISCHARGE POINT CODE: Athboy Pumping Station

$$\text{Formula A} = \text{DWF} + 1.36P + 2E$$

$$\text{Domestic PE} = 5,800 \times 0.8$$

$$= 4,640$$

$$\text{Industrial PE} = 5,800 \times 0.2$$

$$= 1,160$$

$$P = \text{design domestic population at SW002} = 5,800 \text{ pe}$$

$$E = \text{design industrial effluent flow at SW002} = (1,160 \text{ pe} \times 0.225 \text{ l/pe/d})$$

$$= 261 \text{ m}^3/\text{day}$$

$$\text{DWF} = 5,800 \times 0.225 \text{ l/pe/d}$$

$$= 1,305 \text{ m}^3/\text{day}$$

$$\text{Formula A} = \text{DWF} + 1.36P + 2E$$

$$= 1,305 + (1.36 \times 5,800) + (2 \times 261)$$

$$= 1,305 + 7,888 + 522$$

$$= 9,715 \text{ m}^3/\text{day}$$

The dilution of the stormwater overflow is calculated, in accordance with the Procedures and Criteria for Storm Water Overflows as follows:

$$\text{Athboy River} = 0.282 \text{ m}^3/\text{s}$$

$$\begin{aligned} \text{DWF contributing to Athboy Pumping Station:} &= [185 / (24 \times 3600)] \\ &= 0.0151 \text{ m}^3/\text{s} \end{aligned}$$

$$\begin{aligned} \text{Dilution of overflow:} &= (0.282 / 0.0151) \\ &= 18.67 \end{aligned}$$

A stormwater detention tank is not required for a dilution of greater than 8 in accordance with the Procedures and Criteria for Storm Water Overflows.

The forward two feed pumps in at the Athboy Pumping Station are capable of delivering a combined  $600 \text{ m}^3/\text{hr}$ . Formula A flow is calculated at  $404.79 \text{ m}^3/\text{hr}$ . The pumps are capable of delivering formula 'A' flow to treatment.

Athboy Pumping Station complies with Formula A. There is no requirement for a Stormwater tank as calculated by dilution of overflow. Therefore this SWO is fully compliant with the DoEHLG "Procedures and Criteria for Storm Water Overflows", 1995.

## Appendix 7.5

### Specified Improvement Programme

Specified Improvement Programmes (under Schedule C of WWDL)	Licence Completion Date	Date Expired (N/NA/Y)	Status of Works	% Work Completed	Time for Completing the Work	Comments
Wastewater Treatment plant construction and ancillary works	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Athboy Pumping Station (main)	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA1	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA2 (main)	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA3	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed
Rathcairn Pumping Station RA4	30 <sup>th</sup> June 2015	Y	Completed	100%	N/A	Completed

## Appendix 7.6

### Sewer Integrity Tool Output

#### Section 1.1 Agglomeration Details

<b>Agglomeration Name:</b>	<b>Athboy</b>
<b>Licence Register No.</b>	<b>D0124-01</b>

Calculations	Inlet	Final Effluent
Average Flow (m <sup>3</sup> /d)	1,290	1,269
Max Flow (m <sup>3</sup> /d)	3,700	3,384
Total Flow (m <sup>3</sup> /annum)	470,896	463,292
Total Storm Flow (m <sup>3</sup> /annum)	23,545	
Average Influent BOD (mg/l)	111	
Kg -BOD -Year	52,081	
Design p.e	5,800	
Population Equivalent (p.e)	2,378	
Available Capacity	3,422	



Section 2.1 Hydraulic Risk Assessment					
Query	Description	Prompt	Risk Score	Short Commentary by the Local Authority	Comment or Action to be Taken
2.1	<u>Has a Hydraulic Performance Assessment been undertaken for the Sewer Network (e.g., Computer Model or other Engineering Design or Design Review) ?</u>	No	40		If the answer is <b>No</b> assess the need and cost benefit of developing a computer model or engineering design assessment of the Sewer Network and complete Query 2.12. If the answer is <b>Yes</b> proceed to Queries 2.1.1 to 2.1.4 inclusive
2.1.1	If Answer to Query 2.1 is Yes, what % of the Network is covered by the hydraulic assessment ?	N/A	0		The % coverage of the Network by the Hydraulic Assessment can be estimated by the area assessed against the area served by the Network. ENTER "N/A" IF COMPUTER MODEL or DESIGN DOES NOT EXIST. DO NOT LEAVE BLANK OR ENTER "0".
2.1.2	How many years has it been since the <b>completion</b> of the hydraulic assessment ?	N/A	0		Select N/A response if no design assessment or design exists.
2.1.3	Are the outcomes of the Hydraulic Assessment being implemented ?	Yes	0		Select N/A response if no design assessment or design exists.
2.1.4	How many years has it been since the <b>outcomes</b> of the hydraulic assessment have been implemented ?	5 to 10	0		Select N/A response if no hydraulic performance assessment or design exists. For ongoing works select "less than 5".
2.2	<u>Has a Dynamic Computer Model been used to Assess the Hydraulic Performance of the Sewer Network ?</u>	Yes	0		Computer Model means a Hydroworks/Infoworks Model, Micro-Drainage Model or equivalent.
2.3	<u>Has a Manhole Survey been undertaken in accordance with WRc Documentation "Model Contract Document for Manhole Location Surveys and the Production of Record Maps" ?</u>	Yes	0		If the answer is <b>No</b> assess the need and cost benefit of undertaking a Manhole Survey and complete Query 2.12. If the answer is <b>Yes</b> proceed to Query 2.2.1
2.3.1	If yes, how many years has it been since the survey was undertaken or updated?	5 to 10	7		Select N/A if no Manhole Survey has been undertaken. Enter N/A value for Confidence Grade if Prompt Box is "N/A"
2.4	<u>Has a Flow Survey been undertaken in accordance with WRc Documentation "A Guide to Short Term Flow Surveys of Sewer Systems" and "Contract Documents for Short Term Sewer Flows" ?</u>	Yes	0		If the answer is <b>No</b> assess the need and cost benefit of undertaking a Flow Monitoring Survey and complete Query 2.12. If answer is <b>Yes</b> Proceed to Query 2.5
2.5	<u>What was this Flow Survey Information Used for ?</u>				
2.5.1	To Determine the extent of Problematic Sewer Catchments	Yes	0		Select N/A if no Flow Survey has been undertaken.
2.5.2	To Verify a Computer or Mathematical Model of the Network	No	10		Select N/A if no Flow Survey has been undertaken.
2.6	<u>Have Performance Criteria been developed to determine the short, medium or long term capacity of the sewer network ?</u>	Yes	0		If the answer is <b>No</b> assess the Future Needs of the Sewer Network and complete Query 2.12. If the answer is <b>Yes</b> proceed to Query 2.8
2.7	<u>How many flood events resulting from surcharge in the network have occurred in the past 3 years?</u>	None	0		Flood events in this context means water/sewage backing up from the Network causing flooding of properties or causing disruption of traffic
2.8	<u>Are there deficiencies in performance criteria within the sewer network ?</u>	No	0		If the answer is <b>No</b> , Proceed to Query 2.10 and complete Query 2.12. If the answer is <b>Yes</b> proceed to Query 2.9
2.9	<u>Have the causes of these deficiencies in the Performance Criteria been identified and rectified ?</u>	N/A	0		If the answer is <b>No</b> , consider further examination of the hydraulic model (if available) and complete Query 2.12. If the answer is <b>Yes</b> proceed to Query 2.10
2.10	<u>Can the Hydraulic Assessment (defined in Query 2.1 above) be used to determine the benefit of reducing the contributory Impermeable Areas or extent of surface water contributions</u>	N/A	0		If the answer is <b>No</b> , consider further development of the Hydraulic Assessment (or model if available) and complete Query 2.12. If the answer is <b>Yes</b> proceed to Query 2.11
2.11	<u>Has an Impermeable Area Survey been carried out for the agglomeration or parts of the agglomeration ?</u>	No	10		If the answer is <b>No</b> , consider the need and cost benefit of undertaking an Impermeable Survey for parts of the agglomeration which are under hydraulic pressure and complete Query 2.12.
<b>Total Risk Assessment Score (RAS)</b>			<b>67</b>		
2.12	<u>Prepare Assessment of Needs &amp; Sewer Upgrade Implementation Plan</u>	In the AER Attach Assessment of Needs and Rehabilitation Implementation Plan as separate documents			
2.13	In the AER provide Summary of Proposed Works or Direction to be taken to improve hydraulic efficiency				

Section 3.1 Environmental Risk Assessment					
Query	Description	Prompt	Risk Score	Short Commentary by the Local Authority	Comment or Action to be Taken
3.1	<u>What Environmental or Discharge Quality Data is available with regard to the sewer network ?</u>	electronic or paper records exist but are > 10 years old.	0		Select N/A if no discharges, secondary discharges or overflows from network; if discharges do exist complete Query 3.12
3.1.1	<u>Do trade effluents discharge to the sewer network?</u>	Yes	20		If the answer is <b>No</b> , proceed to Query 3.1.2. If the answer is <b>Yes</b> , Proceed to Query 3.2
3.1.2	<u>Are there Storm Water Overflows within the network ?</u>	Yes	20		If the answer is <b>No</b> , proceed to Query 3.1.3. If the answer is <b>Yes</b> , Proceed to Query 3.3
3.1.3	<u>Are there Secondary Discharges within the network (excluding Emergency Overflows at Pump Stations)?</u>	No	0		If the answer is <b>No</b> , proceed to Query 3.1.4.
3.1.4	<u>Is there any evidence that exfiltration is occurring from the network ?</u>	No	0		If the answer is <b>No</b> , does all wastewater enter a wastewater treatment plant (insert summary details in the AER)? If <b>Yes</b> , Proceed to Query 3.6
3.2	<u>If Answer to Query 3.1.1 is "Yes", what % of trade effluents have a licence to Discharge to the Public Sewer ?</u>	N/A	0		Select N/A if answer to Query 3.1.1 is <b>No</b> . If not all trade effluents are licenced, Local Authority should consider issuing and controlling such discharges under the appropriate Legislation.
3.2.1	<u>Are all licenced trade Discharges compliant with their relevant licence and associated conditions</u>	N/A	0		Answer N/A if none of the trade effluents are licenced. Answer No if this information is unknown. If the answer is <b>Unknown</b> or <b>No</b> , consider issuing a direction to the relevant Licencee. If the answer is <b>Yes</b> , no further action is needed.
3.2.2	<u>If Answer to Query 3.2.1 is "No", state what % of Trade Discharges are NOT compliant with their relevant licence and associated conditions (where that non-compliance led to enforcement action)</u>	0 - 10%	5		Select <b>N/A</b> if answer to Query 3.2.1 is Yes. If N/A is selected as answer to Query 3.2.2
3.3	<u>In accordance with the DoEHLG paper "Procedures &amp; Criteria in relation to Storm Water Overflows", what % of storm water overflows in the system have been classified for their significance?</u>	<25%	50		If the answer is <b>No</b> , consider a review of each discharge within the sewer network complete and Query 3.11. If the answer is <b>Yes</b> , proceed to Query 3.6
3.4	<u>Have samples from any Secondary Discharges within the system been analysed ?</u>	N/A	0		Select N/A if no secondary discharges in system. If the answer to Query 3.4 is <b>No</b> , consider examining the quality of each secondary discharge within the sewer network complete Query 3.11. If the answer is <b>Yes</b> , proceed to Query
3.5	<u>What percentage of discharges from the system are known to cause environmental pollution of the receiving waters ?</u>	None	0		If the answer is greater than 50% then detail, in the AER, the Improvement Programme necessary to reduce this percentage.
3.6	<u>In relation to possible exfiltration has a risk analysis of ground water contamination or pollution been undertaken ?</u>	N/A	0		Select N/A if answer to Query 3.1.4 is NO. If the answer is <b>No</b> , consider undertaking ground water risk analysis and complete Query 3.12
3.6.1	<u>If Answer to Query 3.6 is "Yes", have any groundwater aquifers been identified in the area of the Network and/or Discharge Points?</u>	N/A	0		Select <b>N/A</b> if no risk analysis of groundwater contamination has been undertaken.
3.6.2	<u>If Answer to Query 3.6.1 is "Yes", state the classification of groundwater aquifer identified in the area?</u>	N/A	0		Select <b>N/A</b> if no risk analysis of groundwater contamination has been undertaken.
3.6.3	<u>In relation to Query 3.6.1, is the aquifer used as a source for Public, Private or Group Water Supply Schemes?</u>	Yes	5		Select <b>N/A</b> if no risk analysis of groundwater contamination has been undertaken.
3.7	<u>Has an Impact Assessment of each Storm Water Overflow been undertaken in accordance with the DoEHLG paper "Procedures &amp; Criteria in relation to Storm Water Overflows" including setting performance criteria?</u>	Yes	0		If the answer is <b>No</b> , consider assessing the risk category of the receiving waters. If the answer is <b>Yes</b> , proceed to Query 3.8 and provide summary details of the assessment in the AER.
3.8	<u>What percentage of storm water overflows comply with the performance criteria referred to in Query 3.7?</u>	N/A	30		Select N/A if answer to Query 3.7 is <b>No</b> or if there are no SWOs in system. ( <b>Risk Score is locked at 0 if no SWOs in system is stated in Agglomeration Details</b> )
3.9	<u>Have the causes of these Capacity Deficiencies (storm water overflows &amp; Secondary Discharges) been identified ?</u>	N/A	0		Select N/A if answer to Query 3.7 is NO or if there are no SWOs in system. If the answer to Query 3.9 is <b>No</b> , consider further examination of the environmental
Total Risk Assessment Score (RAS)			130		
3.10	<u>Prepare Assessment of Needs &amp; Sewer Upgrade Implementation Plan</u>	In the AER Attach Assessment of Needs and Rehabilitation Implementation Plan as separate documents			
3.11	Provide Summary Details (in the AER) of records upstream and downstream of licenced discharges with regard to Environmental Performance of the network. These details can be included as part of the AER submitted for the agglomeration.				

Section 4.1 Structural Risk Assessment					
Query	Description	Prompt	Risk Score	Short Commentary by the Local Authority	Comment or Action to be Taken
4.1	<u>Has a CCTV Survey been undertaken in accordance with WRc Documentation "Model Contract Document for Sewer Condition Inspections" and "Manual of Sewer Condition Classification" ?</u>	Yes	0		If the answer is <b>No</b> assess the need and benefit of undertaking CCTV Survey. If <b>Yes</b> Proceed to Query 4.2
4.1.1	How many years has it been since the completion of the CCTV Survey?	5 to 10	5		If no CCTV has been undertaken, select "N/A" response
4.2	<u>What was this CCTV Survey Information Used for?</u>	Minimal Survey to Determine extent of Problem Sewers	5		Select N/A if answer to Query 4.1 is NO.
4.3	<u>Has the CCTV Survey been used to Assess the Structural Condition of the Sewer Network or targeted sections of the Sewer Network?</u>	Yes	0		If no CCTV has been undertaken, select "No" response. If the answer is <b>No</b> assess the need and benefit of undertaking an assessment of the Structural Condition of the Sewer Network. If the answer is <b>Yes</b> proceed to Q
4.4	<u>Have Performance Criteria been developed to determine the short, medium or long term structural condition of the sewer network ?</u>	No	5		If the answer is <b>No</b> , enter "unknown" in response to Queries 4.4.1 to 4.4.5; consider assessing the Future Needs of the Sewer Network. If the answer is <b>Yes</b> proceed to Queries 4
4.4.1	What % of the Total Sewer Length contains Collapsed or Imminent Collapse of Sewers (Grade 5)	0%	0		Insert Percentage of Overall Network Length; If a sewer length contains a Grade 5 collapse, include the total length of that sewer in calculating the %. If information is not available type "Unknown" into Prompt Box
4.4.2	What % of Total Sewer Length contains Sewers Likely to Collapse (Grade 4)	0%	0		Insert Percentage of Overall Network Length; If a sewer length contains a Grade 4 condition, include the total length of that sewer in calculating the %. If information is not available type "Unknown" into Prompt Box
4.4.3	What % of Total Sewer Length contains sewers with Further Possible Deterioration (Grade 3)	0%	0		Insert Percentage of Overall Network Length; If a sewer length contains a Grade 3 deterioration, include the total length of that sewer in calculating the %. If information is not available type "Unknown" into Prompt Box
4.4.4	What % of Total Sewer Length contains sewers with Minimal Collapse (Grade 2)	0%	5		Insert Percentage of Overall Network Length; If a sewer length contains a Grade 2 feature, include the total length of that sewer in calculating the %. If information is not available type "Unknown" into Prompt Box
4.4.5	What % of Total Sewer Length contains sewers of Acceptable Structural Condition (Grade 1)	100%	0		Insert Percentage of Overall Network Length. If information is not available type "Unknown" into Prompt Box
If all % lengths are known, Check Total Length = 100%		100%	5		If answers to Queries 4.4.1, 4.4.2 or 4.4.3 are above a set level, the RAS for Query 4 is automatically set at the maximum of 140.
4.5	<u>What % of the deficiencies, as detailed in Items 4.4.1, 4.4.2 and 4.4.3, have been rectified ?</u>	N/A	35		Select N/A if answer to Query 4.4 is <b>No</b> . If the answer is <b>No</b> , Proceed to Query 4.6 If the answer is <b>Yes</b> , what monitoring is in place to ensure continued acceptance of structural condition? Proceed to Query 4.7
4.6	<u>Have the causes of the Structural Deficiencies (Grades 3, 4 and 5) been identified or is there a Preventative Maintenance Programme in place?</u>	No	10		If the answer is <b>No</b> , consider further examination of the sewer network, the structural loading conditions, gradients and possible H <sub>2</sub> S Formation. If <b>Yes</b> completed Query 4.7
Total Risk Assessment Score (RAS)			65		
4.7	<u>Prepare Assessment of Needs &amp; Sewer Rehabilitation Implementation Plan</u>	In the AER Attach Assessment of Needs and Rehabilitation Implementation Plan as separate documents			

Section 5.1 O&M Risk Assessment					
Query	Description	Prompt	Risk Score	Short Commentary by the Local Authority	Comment or Action to be Taken
5.1	<u>Are complaints of an environmental nature recorded and held in a central database?</u>	Yes	0		Consider setting up Central Database for Complaints
5.2	<u>Is there an emergency response procedure in place?</u>	Yes	0		Consider setting up target response times for dealing with Complaints
5.3	<u>What has been the highest frequency of flooding in the network due to hydraulic inadequacy, over the past 5 years?</u>	Once/yr	4		Refers to flooding from the Network only, not natural flooding from rivers/streams/high tides. Select the highest number of events in any 12 month period.
5.4	<u>What has been the highest frequency of flooding in the network due to operational causes over the past 5 years?</u>	Once/yr	4		Refers to flooding from the Network only, not natural flooding from rivers/streams/high tides. Select the highest number of events in any 12 month period.
5.5	<u>What has been the highest frequency of surcharging of critical sewers in the network, over the past 5 years?</u>	Once/yr	2		Select the highest number of events in any 12 month period.
5.6	<u>What has been the highest frequency of reportable incidents in the network, over the past 5 years?</u>	None	0		Select the highest number of events in any 12 month period.
5.7	<u>What has been the highest frequency of reportable incidents due to discharges, for whatever reason, from Pumping Station Emergency Overflows in the network, over the past 5 years?</u>	None	0		Select the highest number of events at any given Pumping Station in any 12 month period.
5.8	<u>What has been the highest frequency of blockages in sewers in the network over the past 5 years?</u>	>0.25/km/yr	20		Select the highest number of events per km of sewer network in any 12 month period.
5.9	<u>What has been the highest frequency of collapses in sewers in the network over the past 5 years?</u>	None	0		Select the highest number of events in any 12 month period.
5.10	<u>What has been the highest frequency of bursts in rising mains in the network over the past 5 years?</u>	None	0		Select the highest number of events in any 12 month period.
Total Risk Assessment Score (RAS)			30		
5.11	<u>Prepare Up Dated Operational and Maintenance Plan</u>				

Section 6.1 Summary of Risk Assessment Scores				
Element	Risk Assessment Score	Risk Category	% Risk Score	Maximum Risk Score
Section 2.1 Hydraulic Risk Assessment	67	Medium Risk	45%	150
Section 3.1 Environmental Risk Assessment	130	Low Risk	26%	500
Section 4.1 Structural Risk Assessment	65	Medium Risk	43%	150
Section 5.1 O&M Risk Assessment	30	Low Risk	15%	200
<b>Total RAS for Network</b>	<b>292</b>	<b>Low Risk</b>	<b>29%</b>	<b>1000</b>

If the total RAS is greater than 750, or if any of the individual RASs are greater than 75% of the Maximum Available Score, the Risk category for the Network is graded "High Risk"

## Appendix 7.7

### Priority Substances Assessment

#### Introduction

This report has been prepared in accordance with EPA Licence D0124-01, governing Athboy WWTP and associated discharges in Athboy, County Meath.

This desk top study has been undertaken to determine the necessity, if any, for analysis of the discharge to comply with the condition in the wastewater discharge licence based on the *Guidance on the Screening for Priority Substances for Waste Water Discharge Licences*, issued by the EPA. Relevant inputs to the waste water works and estimates of emissions from the discharge point have been taken into account in the preparation of this report. Relevant inputs to the waste water works, any relevant measurements / calculations / estimates of emissions from the discharge point and any relevant measurements undertaken at representative downstream monitoring locations, have been taken into account in the preparation of this report.

#### Desktop Study

##### **1.1 Assessment of Analysis Required**

##### **A. Review of all industrial inputs into WWTP**

A review of all inputs into WWTP has indicated that there are no industrial type discharges, or other discharges with a likelihood of containing priority substances, leachate discharges or other imports within the agglomeration. The wastewater discharged to the wastewater treatment plant is domestic in nature.

##### **B. Discharge monitoring**

Monitoring was carried out for Priority Substances in October 2013. The results from this round of testing are included in Appendix 1 of this report. There have been no significant changes to the agglomeration since these samples were submitted for analysis.

##### **C. Downstream monitoring location's participation in relevant monitoring programme**

No downstream samples have been taken and analysed for priority substances.

##### **D. Participation in PRTR reporting**

A PRTR is included in this AER in Appendix 7.3.

##### **1.2 Review outcome of Desktop study**

Following the desktop study, all parameters in Appendix 1 have been assessed to establish any potential impact on the receiving waters. A review of the national monitoring

programme for priority substances in wastewater is proposed to be undertaken by Irish Water in 2015 in consultation with the EPA. It is proposed that this review, in consultation with the EPA, will recommend parameters to be monitored and frequency of monitoring at Irish Water WWTP's.

## **Assessment of Significance and Recommendations**

The assessment carried out above indicates that data is available for all parameters based on either analysis or the PRTR toolkit. The level of dilution is based on 95 percentile flows and the EQS is based on Annual Average concentration requirements. As such the results of the analysis undertaken are conservative.

No parameters have been identified as potentially being higher than the required EQS following dilution at 95 percentile flows therefore no impact on the receiving waters is anticipated. Based on the assessment carried out it is not considered that any further sampling or analysis is required.

The EPA has prepared a report on priority substances, *An Inventory of Emissions to Waters in Ireland*. This document states that Ireland appears to have relatively few problems associated with the presence of Priority / Priority Hazardous substances in its surface waters. It identifies that wastewater discharges are a potential source of metals in receiving waters with lead being the main metal identified as associated with wastewater discharges. However, metals exceedences, in particular those for cadmium, lead, and nickel are primarily associated with areas of historic mining activity. Similarly PAH's have been identified in stormwater overflows but the most significant source is considered to be rainfall.

A consultation process with the EPA is proposed to be undertaken by Irish Water in 2015 to establish appropriate levels of monitoring for priority and dangerous substances, taking into account the particular requirements of the Water Framework Directive. This will allow a targeted monitoring programme to be undertaken in areas where priority substances have been identified or industrial discharges or imports provide a potential source, and where there is a shortfall of existing monitoring data.

## Appendix 1 – Screening of Parameters for Priority Substances



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

21 October 2013

**Test Report: COV/959438/2013**

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



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.



# 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/959438/2013**

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.

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**Page 1 of 6**

# Certificate of Analysis



Report Number: **COV/959438/2013**

Issue **1**

Laboratory Number: **13724700**

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

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **Athboy D0124**

Sample Matrix: **Waste waters**

Sample Date/Time: **01 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	0.0169	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	<0.009	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	0.005	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	0.06	mg/l	Y Cov	WAS049
pH	7.5	pH units	Y Cov	WAS039
Conductivity- Electrical 20C	1380	uS/cm	Y Cov	WAS039
Total Hardness as CaCO3	393	mg/l	Y Cov	WAS049
Chloride as Cl	233	mg/l	Y Cov	WAS036
TOC as C	6.5	mg/l	Y Cov	WAS005
Cyanide, Total as CN	<0.009	mg/l	Y Cov	WAS018
Fluoride as F	<0.2	mg/l	Y Cov	WAS029
Diuron	<0.05	ug/l	Y Cov	GEO37
Isoproturon	Analyst Comment	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

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Page 2 of 6

# Certificate of Analysis



1314  
0897  
4409



Report Number: **COV/959438/2013**

Issue **1**

Laboratory Number: **13724700**

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

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **Athboy D0124**

Sample Matrix: **Waste waters**

Sample Date/Time: **01 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

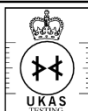
Test Description	Result	Units	Accreditation	Method
PCB 101	<2	ng/l	Y Cov	GEO47
PCB 118	<3	ng/l	Y Cov	GEO47
PCB 138	<2	ng/l	Y Cov	GEO47
PCB 153	<2	ng/l	Y Cov	GEO47
PCB 180	<3	ng/l	Y Cov	GEO47
Atrazine	<0.020	ug/l	Y Cov	GEO47
Simazine	<0.020	ug/l	Y Cov	GEO47
2,4 - D	<0.07	ug/l	Y Cov	GEO20
MCPA	<0.08	ug/l	Y Cov	GEO20
Mecoprop	0.05	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

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# Certificate of Analysis



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Report Number: **COV/959438/2013**

Issue **1**

Laboratory Number: **13724700**

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

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **Athboy D0124**

Sample Matrix: **Waste waters**

Sample Date/Time: **01 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

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# Certificate of Analysis



Report Number: **COV/959438/2013**

Issue **1**

Laboratory Number: **13724700**

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

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **Athboy D0124**

Sample Matrix: **Waste waters**

Sample Date/Time: **01 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

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# Certificate of Analysis



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0897  
4409



Report Number: **COV/959438/2013**

Issue **1**

Laboratory Number: **13724700**

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

Sample Source: **Meath County Council**

Sample Point Description:

Sample Description: **Athboy D0124**

Sample Matrix: **Waste waters**

Sample Date/Time: **01 October 2013**

Sample Received: **02 October 2013**

Analysis Complete: **21 October 2013**

Test Description	Result	Units	Accreditation	Method
MTBE	<1.0	ug/l	Y Cov	GEO32
Dibromofluoromethane	102.0	%Recovery	N Cov	GEO32
Toluene-d8	101.4	%Recovery	N Cov	GEO32
4-Bromofluorobenzene	89.2	%Recovery	N Cov	GEO32
Antimony, Total as Sb	0.0077	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 13724700:

This sample has been analysed for Pesticides method GEO47, pH outside recommended stability times. It is therefore possible that the results provided may be compromised. The reporting limits for MCPA and 2,4-D have been raised due to interferences. Unable to report Isoproturon due to quality failure.

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, Wsk = 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**

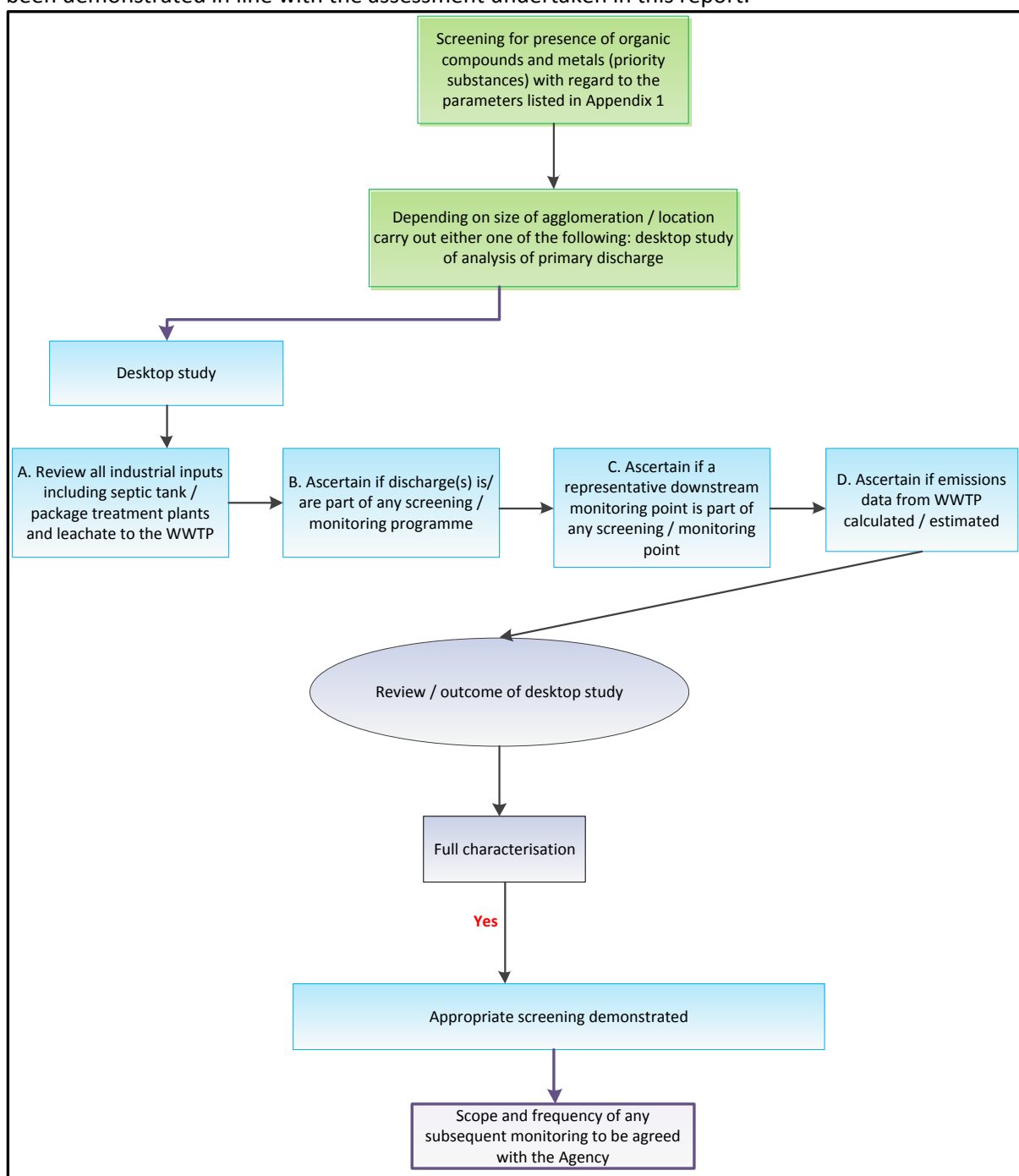
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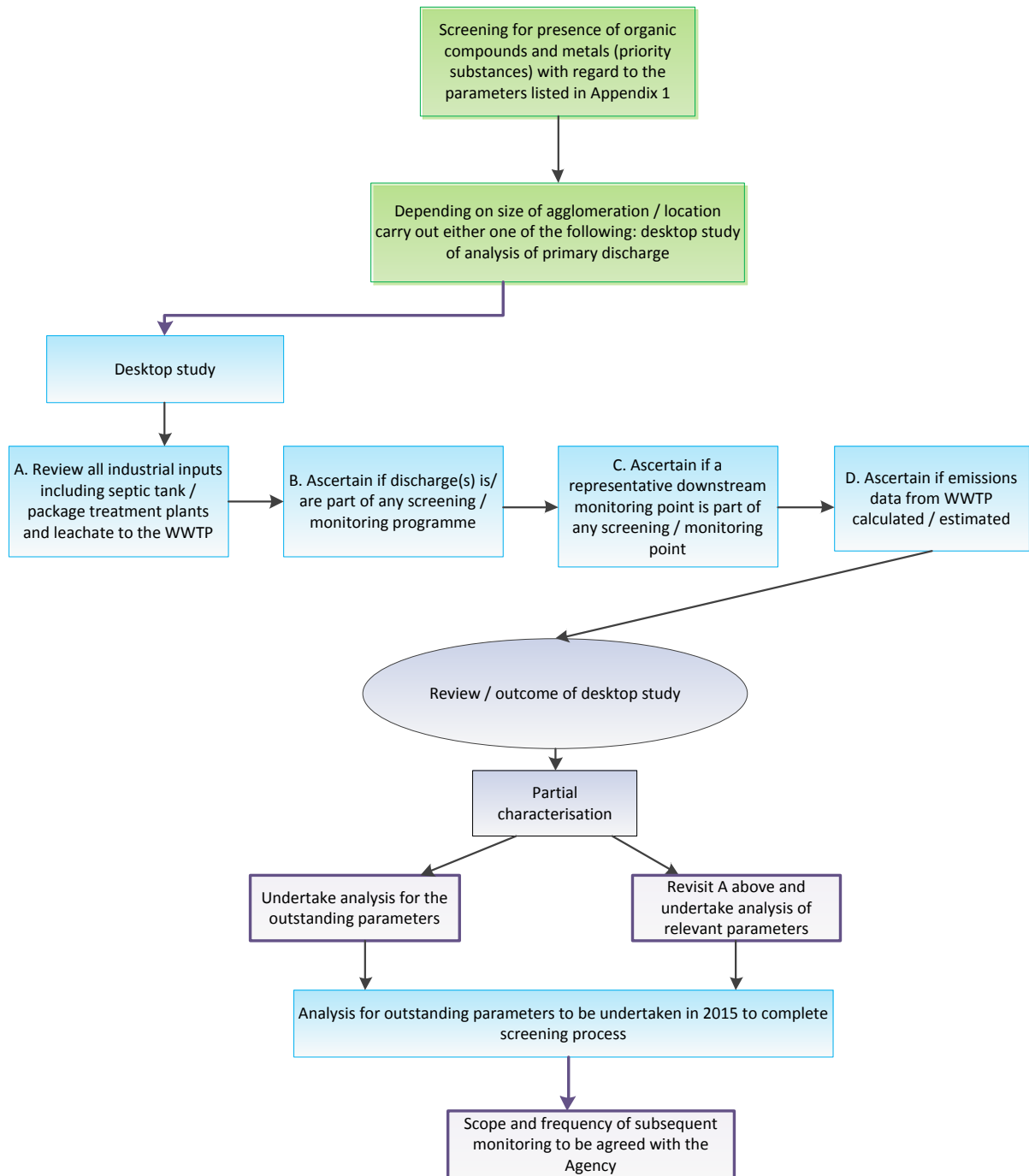
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## Appendix 2 – Priority Substance Screening Flowchart

A flow chart for the screening of the presence of organic compounds and metals (Priority Substances) from WWTP is included below. This flowchart shows that appropriate screening has been demonstrated in line with the assessment undertaken in this report.







### **Appendix 3 – Receiving Waters Priority Substance Data**

No Data Available

## **Appendix 7.8**

### **Drinking Water Abstraction Point Risk Assessment**