

*Comhairle Contae Thiobraid Árann Thuaidh*  
**North Tipperary County Council**



Thurles Agglomeration

Waste Water Discharge Licence Register No. D0026-01

1<sup>st</sup> Annual Environmental Report  
( Licence issued 13 September 2013)

Reporting Period  
1 January 2013 to 31 December 2013

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## **1.0 Introduction and Executive Summary**

### **1.1 Introduction**

The Environmental Protection Agency granted North Tipperary Co. Council a Wastewater Discharge Licence (Register No. D0026-01) on 13 September 2013 in respect of the Agglomeration named Thurles. One of the provisions of the Licence (Condition 6.8) is that North Tipperary Co. Council submit to the Agency at the end of the year an “Annual Environmental Report” (AER) to provide a summary of the activities relevant to the discharges for that year. This is the first AER for Thurles and includes the information specified in Schedule D of the licence.

This AER has been prepared in accordance with the EPA document:- “Guidance on the Preparation & Submission of the Annual Environmental Report (AER) for Waste Water Discharge Licences for 2013”

Thurles Waste Water Plant is located at Commons, Thurles, 2 km southwest of Thurles Town Centre. The plant was upgraded in 2008 and provides secondary treatment with phosphorus removal. The sewage system in Thurles is a combined system.

The Thurles Waste Water Treatment Plant (WWTP) was designed to cater for a population equivalent (p.e.) of 15,000. The existing p.e. (2013 data) served by the wastewater works is 11,790 PE.

The waste water treatment system is an activated sludge process. It includes screening, grit trap, aeration tanks, clarification and phosphorus removal. The plant also includes a sludge processing system (picket fence thickening and centrifuge) in which activated sludge is dewatered prior to recovery off site.

Thurles WWTP discharges through the primary discharge point, SW001 (EDEN Code TPEFF2800D0026SW001), to the River Suir.

Thurles Agglomeration has 5 No. Pumping Stations. Two pumping stations are equipped with emergency overflows and two are equipped with stormwater overflows.

## 1.2 Executive Summary

Thurles WWTP has continued to operate effectively in this reporting period. The WWTP is operated and managed by North Tipperary Co. Council.

A review of the final effluent results and compliance with the Emission Limit Values as set out in the Licence shows that Thurles WWTP is by and large compliant with its licence. The only exception to this is the Orthophosphate and Ammonia.

The total wastewater inflow to Thurles WWTP for the year 2013 was 2,168,220m<sup>3</sup>, while the current flow weighted average influent cBOD to Thurles WWTP is 119.09mg/l, giving a current Population Equivalent (P.E.) of 11,790. This compares favourably to a plant design of 15,000 PE.

A small amount of landfill leachate (6,973m<sup>3</sup>) was treated at Thurles WWTP.

Alum sludge (325m<sup>3</sup>) from Roscrea Drinking Water Supply Plant was used as an agent to precipitate phosphate compounds from wastewater in Thurles. Alum sludge is a byproduct of the processes employed to produce water fit for human consumption in Drinking Water Supply Plants.

Thurles WWTP is operating within its hydraulic and treatment capacities.

A review of the ambient monitoring results for upstream and downstream of Thurles WWTP's Primary Discharge Point is having no significant adverse impact on the quality of the receiving waters.

The percentage reductions shown in the WWTP efficiency report (Table No.11) show that Thurles WWTP is an efficient plant, with reductions of 99.20%, 98.71%, 99.24%, 97.80%, 93.31% and 88.28% for cBOD, COD, Suspended Solids, Ammonia, Total Phosphorus and Orthophosphate respectively.

Appendix A of this AER contains the Pollutant Release and Transfers Register (PRTR) for 2013 which details the annual mass emissions to air and water and the solid waste transfers for 2013.

Appendix B is a Sewer Integrity Risk Assessment Report. The sewer network of Thurles Agglomeration is classed as having a High Risk Status.

## 2.0 Monitoring Reports Summary

### 2.1 Summary Report on Monthly Influent Monitoring

Table 1 below is a tabular presentation of the wastewater treatment plant influent monthly monitoring results for cBOD, COD, Suspended Solids, Total Phosphorus (as P), Total Nitrogen (as N), Ammonia (as N), Orthophosphate (as P) and pH. Also set out in Table 2 below is the calculation of the p.e. equivalent load and the flow weighed average BOD load for the WWTP.

**Table 1: Waste Water Treatment Plant Influent Monitoring Results for 2013**

SampleDate	Flow m3/day	Ammonia as N (mg/l as N)	cBOD (mg/l O2)	Chemical Oxygen Demand (mg/l O2)	O- Phos (mg/l PO4 as P)	pH (pH units)	Suspended Solids (mg/l)	Total Nitrogen (mg/l as N)	Total Phosphorus (mg/l as P)	Organic Loading PE
10/01/2013	8595	12.62	49	107	1.69	8.18	82	19.4	3.25	7019
05/02/2013	9503	6.93	58	165	0.94	7.5	97	14.8	1.96	9186
14/03/2013	6013	14.13	88	160	1.52	7.69	108	19.8	2.96	8819
11/04/2013	6844	24.63	166	357	2.2	8.01	232	31.6	4.7	18935
09/05/2013	5360	15.87	103	192	1.77	7.95	136	21.2	3	9201
06/06/2013	4439	22.66	171	335	2.73	7.95	239	34	5.8	12651
02/07/2013	4540	22.41	189	380	2.67	7.87	232	34	5.05	14301
01/08/2013	5574	9.05	79	185	1.22	7.74	164	16.5	2.8	7339
03/09/2013	4076	27.47	239	872	3.05	7.89	292	37	6.45	16236
01/10/2013	5025	23.13	227	480	3.24	7.76	360		6.4	19011
12/11/2013	7299	11.76	57	70	1.27	7.95	82		2.25	6934
03/12/2013	5699	19.62	160	426	2.08	7.9	232		4.6	15197
<b>Average</b>		<b>17.52</b>	<b>132.17</b>	<b>310.75</b>	<b>2.03</b>	<b>7.87</b>	<b>188</b>	<b>25.37</b>	<b>4.11</b>	<b>12069</b>
<b>Annual Max</b>		<b>27.47</b>	<b>239</b>	<b>872</b>	<b>3.24</b>	<b>8.18</b>	<b>360</b>	<b>37</b>	<b>6.45</b>	<b>19011</b>

### Calculation of the Population Equivalent load to the WWTP

The total influent for the year 2013 was 2,168,220.40m<sup>3</sup>

The flow weighed average influent cBOD as calculated per Table 2 below is 119.09mg/l

The Thurles population equivalent was determined by the following formula:

Total Influent Flow for 2013 x flow weighed averaged influent cBOD divided by (0.06x365x1000)

Therefore the p.e. = (2,168,220x119.09)/(0.06x365x1000) = 11790.35

**Table 2: Calculation of the Flow Weighed Average BOD for 2013**

	Influent (m <sup>3</sup> /day)	cBOD (mg/l)	BOD (kg/day)
10/01/2013	8595	49	421.16
05/02/2013	9503	58	551.17
14/03/2013	6013	88	529.14
11/04/2013	6844	166	1136.1
09/05/2013	5360	103	552.08
06/06/2013	4439	171	759.07
02/07/2013	4540	189	858.06
01/08/2013	5574	79	440.35
03/09/2013	4076	239	974.16
01/10/2013	5025	227	1140.68
12/11/2013	7299	57	416.04
03/12/2013	5699	160	911.84
Total	<b>72967</b>		8689.85

The flow weighed average cBOD is 8689.85Kg x 1000/ 72967m<sup>3</sup> = 119.09mg/l

## 2.2 Discharges from the agglomeration

Presented below in Table 3 are the primary discharge point monitoring results for the parameters as set out in Schedule 8 of the licence and a summary of the effluent monitoring and overall compliance with the licence Emission Limit Values (ELVs).

**Table 3: Tabular presentation of the wastewater treatment plant effluent monitoring results with the associated Emission Limit Values (ELVs)**

Sample Date	Outflow M3/day	Ammonia (mg/l as N)	cBOD (mg/l O2)	Chemical Oxygen Demand (mg/l O2)	O-Phos (mg/l PO4 as P)	pH (units)	Suspended Solids (mg/l)	Total Phosphorus (mg/l as P)
<b>ELVs</b>		<b>0.5</b>	<b>6</b>	<b>125</b>	<b>0.3</b>	<b>6-9</b>	<b>35</b>	<b>2</b>
10/01/2013	3600	0.024	3	10	0.276	7.95	4.8	0.37
05/02/2013	4181	0.112	3	7	0.326	7.44	4	0.42
14/03/2013	2027	5.56	3	12	0.303	7.61	6.8	0.4
11/04/2013	2335	1.69	3	11	0.405	7.93	4.8	0.52
09/05/2013	4469	0.029	3	12	0.785	7.67	3.2	0.86
06/06/2013	3754	0.02	3	19	0.287	8.13	4.4	0.42
02/07/2013	3627	0.088	3	11	0.697	7.77	4.4	0.8
01/08/2013	4623	0.054	2	13	0.328	7.78	0.8	0.49
03/09/2013	3420	3.26	3	11	2.22	7.6	4.4	2.24
<b>Results since WWDL was granted</b>								
01/10/2013	4031	2.54	3	15	1.16	7.56	8	1.29
12/11/2013	5778	0.497	2	2	0.375	7.67	0.8	0.42
03/12/2013	4812	1.52	3	8	0.552	7.35	3.2	0.66
<b>Average for 2013</b>		<b>1.28</b>	<b>2.83</b>	<b>10.92</b>	<b>0.64</b>	<b>7.71</b>	<b>4.13</b>	<b>0.74</b>
<b>Average since Introduction of WWDL</b>		1.52	2.67	8.33	0.70	7.53	4	0.79



**Table 4: Summary of Effluent monitoring and Compliance since Grant of Licence (since 13 September 2013)**

	cBOD (mg/l)	COD (mg/l)	TSS (mg/l)	Orthophosphate as P(mg/l)	Total Phosphorus as P (mg/l)	pH Units	Ammonia (mg/l)
WWDL ELV (Schedule A)	6	125	35	0.3	2	6-9	0.5
ELV with Condition 2 Interpretation included	12	250	87.5	0.6	2.4		1.0
Number of sample results	3	3	3	3	3	3	3
Number of sample results above WWDL ELV	0	0	0	3	0	0	2
Number of sample results above ELV with Condition 2 Interpretation included	0	0	0	1	0	0	2
Annual Mean (for parameters where a mean ELV applies)					0.79		
<b>Overall Compliance (Pass/Fail)</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Fail</b>	<b>Pass</b>	<b>Pass</b>	<b>Fail</b>

**Comment:**

As Table 4 above shows Thurles WWTP exceeded its ELVs for Ammonia and Orthophosphate. A process and optimisation review is underway in order to examine if improved compliance for these parameters can be achieved utilising the existing infrastructure.

**Table 5: Summary of Thurles WWTP Primary Discharge Point Daily Flow Recordings (m3/day) for 2013 - as required under Schedule A (Discharge Monitoring ) of the Discharge Licence.**

Total Annual Flow at Primary Discharge Point (PDP)	1,572,913m3/annum
Minimum Discharge Flow at PDP	1,559m3/day
Maximum Discharge Flow at PDP	14,643m3/day
Average Daily Discharge Flow at PDP	4,309.35m3/day

### 2.3 Ambient Monitoring Summary

The ambient monitoring results for the parameters as set out in Schedule B of the licence is presented in Table No.6 (upstream) and Table No.7 (downstream) below. Also presented in Table 10 is a summary of the ambient monitoring . The monitoring results show that the discharge is not having any significant impact on the quality of the receiving water.

**Table 6: Ambient Monitoring Results – Upstream- at EDEN Code RS16S020900 upstream of Thurles E211235 N156066**

Station Location	Sample Date	pH	DO % Saturation	cBOD mg/l	Temperature (oC)	O-Phos (mg/l PO4 as P)	Total Phosphorus (mg/l as P)	Total Ammonia
RS16S020900	10/01/2013	8.13		1.8	6.1	0.028	0.07	0.081
RS16S020900	05/02/2013	7.99		1.6	7.1	0.024	0.05	0.086
RS16S020900	14/03/2013	8.19		1.7	6	0.017	0.03	0.107
RS16S020900	11/04/2013	8.12		1.8	8.9	0.025	0.09	0.093
RS16S020900	09/05/2013	8.17		2	10.2	0.011	0.02	0.01
RS16S020900	06/06/2013	8.1		1.8	16.1	0.01	0.02	0.01
RS16S020900	02/07/2013	8.09		1.7	13.4	0.051	0.03	0.019
RS16S020900	01/08/2013	7.96		1.5	17	0.036	0.14	0.046
RS16S020900	03/09/2013	8.1		1.3	16.3	0.031	0.07	0
RS16S020900	01/10/2013	7.58	71	2.4	15.7	0.04	0.08	0.302
RS16S020900	12/11/2013	7.88	84.6	1.4	9.1	0.024	0.06	0.029
RS16S020900	03/12/2013	7.97	86.6	1.2	7.7	0.037	0.12	0.022
	<b>Average</b>	<b>8.02</b>	<b>80.73</b>	<b>1.68</b>	<b>11.13</b>	<b>0.028</b>	<b>0.065</b>	<b>0.067</b>
	Maximum	8.19	86.6	2.4	16.3	0.051	0.14	0.302

**Table 7: Ambient Monitoring Results Downstream - at EDEN Code RS16I150840 downstream of Thurles E210817 N155955**

Station Location	Sample Date	pH	DO % Saturation	cBOD mg/l	Temperature (oC)	O-Phos (mg/l PO4 as P)	Total Phosphorus (mg/l as P)	Total Ammonia
RS16I150840	10/01/2013	8.13		1.7	6.4	0.026	0.07	0.09
RS16I150840	05/02/2013	8.01		1.7	7.3	0.024	0.06	0.083
RS16I150840	14/03/2013	8.21		1.6	5.8	0.038	0.04	0.101
RS16I150840	11/04/2013	8.12		1.6	9	0.025	0.09	0.094
RS16I150840	09/05/2013	8.21		2.4	10.8	0.015	0.03	0.01
RS16I150840	06/06/2013	8.11		1.8	15.7	0.017	0.04	0.013
RS16I150840	02/07/2013	8.12		1.7	13.3	0.013	0.03	0.014
RS16I150840	01/08/2013	7.98		1.4	17.1	0.031	0.15	0.048
RS16I150840	03/09/2013	8.11		1.2	15.7	0.047	0.07	0
RS16I150840	01/10/2013	7.97	70.6	2.4	15.1	0.046	0.11	0.382
RS16I150840	12/11/2013	7.89	85.1	1.6	9.1	0.023	0.04	0.032
RS16I150840	03/12/2013	8.09	85.1	1.3	7.8	0.023	0.03	0.021
	<b>Average</b>	<b>8.08</b>	<b>80.27</b>	<b>1.7</b>	<b>11.09</b>	<b>0.027</b>	<b>0.063</b>	<b>0.074</b>
	Maximum	8.21	85.1	2.4	17.1	0.047	0.15	0.382

**Ambient monitoring summary**

In 2013, ambient sampling consisted of 12 grab samples taken for both upstream and downstream of the primary discharge point (Tables 6 and 7).

The ambient monitoring samples were compared to the criteria for calculating surface water ecological status and ecological potential as set out under Schedule 5 of the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (see Table 8 below).

The grab samples upstream of Thurles WWTP, were classified as having a “less than good” water status, by comparing the Total Ammonia, BOD and Orthophosphate parameters to the parameters set out in Schedule 5. Similarly, the grab sample taken downstream classified as having a “less than good” water status, by comparing the Total Ammonia, BOD and Orthophosphate parameters to the parameters set out in Schedule 5. See Table 13.

The discharge does not appear to have any significant adverse chemical effect on the Nenagh River.

Using the EPA’s Envision Mapping System, Ecological Standards (Q values) for the River Suir were identified upstream and downstream of Thurles WWTP. The Q value for an upstream location (Cabragh Bridge-Location Code 16S02-0900) following an ecological survey carried out by the EPA in 2011 was Q3-4 (Moderate Status).

The Q value for a downstream location (Holycross Bridge -Location Code 16S02-1100) following an ecological survey carried out by the EPA in 2011 was Q3-4 (Moderate Status).

The discharge does not appear to have any significant adverse effect either chemically or ecologically on the River Suir.

**Table 8: Schedule 5 of the European Communities Environmental Objectives (Surface Waters) Regulations 2009**

Parameter	Value	Status
BOD	<1.3 (mean) or <2.2 (95%ile)	High
BOD	<1.5(mean) Or <2.6(95%ile)	Good
Total Ammonia	<0.040 (mean) or <0.090 (95%ile)	High
Total Ammonia	<0.065 (mean) or <0.140 (95%ile)	Good
MRP	<0.025(mean) or <0.045 (95%ile)	High
MRP	<0.035 (mean) or <0.075 (95%ile)	Good

**Table 9: Ecological Status of River Suir (upstream and downstream of Thurles WWTP)**

Parameter	Upstream	Status	Overall Status for Upstream	Downstream	Status	Overall Status for Downstream
BOD	1.68(mean)	Less than good	Less than Good	1.70	Less than good	Less than good
Total Ammonia	0.302(mean)	Less than good		0.382	Less than good	
Orthophosphate	0.028(mean)	Good		0.027	Good	

**Table 10: Ambient Monitoring Summary Table**

Ambient Monitoring Point from WWDL	Irish Grid Reference	EPA Feature Coding Tool Code	Is discharge impacting on water quality
Upstream	E211235 N156066	RS16S020900	No
Downstream	E210817 N155955	RS16I150840	No

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

It is confirmed that the annual urban wastewater information for agglomerations and treatment plants with a population equivalent greater than 500 for the year 2013 was submitted to the EPA in electronic form in 2014.

#### **2.5 Pollutant Release and Transfer Register (PRTR)**

This information has been submitted electronically to the EPA. The PRTR Emissions Data Information (i.e. all relevant worksheets including the Facility ID and Activities Sheet) have been printed out and included in this section of the AER –see Appendix No.1 attached.

### **3.0 Operational Reports Summary**

#### **3.1 Treatment Efficiency Report**

Presented below in Table 11 is a summary of the treatment efficiency of Thurles WWTP process including information for all the parameters specified in the discharge in the discharge licence. As can be seen from Table 11, Thurles WWTP is an efficient plant.

**Table 11: Treatment Efficiency Report Summary Table**

	BOD	COD	SS	Ammonia	Total Phosphorus	Orthophospahte
Influent Mass Loading (kg/day)	1498.13	3492.85	2145.7	201.83	47.22	23.38
Effluent Mass Loading (kg/day)	11.97	45.11	16.33	4.44	3.16	2.74
% Efficiency Reduction	99.20	98.71	99.24	97.80	93.31	88.28

#### **3.2 Treatment Capacity Report**

Presented below is a summary of the current and remaining treatment capacity of the treatment process

**Table 12: Treatment Capacity Report Table**

Hydraulic Capacity – Design/As Constructed (m3/day)	
Hydraulic Capacity – Current Loading (m3/day)	5,940m3/day
Hydraulic Capacity – Remaining (m3/day)	
Organic Capacity – Design /As Constructed(pe)	
Organic Capacity – Current loading (pe)	11,790
Organic Capacity – Remaining (pe)	15,000
Will the capacity be exceeded in the next 3 years? (Yes/No)	No

### 3.3 Complaints Summary

There were no complaints received about the activities carried out in Thurles during 2013. There were also no complaints of an environmental nature relating to the discharge from Thurles WWTP.

### 3.4 Reported Incidents Summary

There were 2 recorded incidents in relation to Thurles WWTP in 2013.

**Table 13: Incidents Summary**

Date and Time	Incident Description	Incident Type(e.g. Non-Compliance, Emission, Spillage, Pollution Incident)	Cause	Corrective Action	Authorities Contacted	Reported to EPA	Closed (Y/N)
2/10/13		Non-compliance emission. Final discharge exceeded Ammonia ELV.			No	Yes	Yes
3/12/13		Non-compliance emission. Final discharge exceeded Ammonia ELV			No	Yes	Yes

**Table 14: Summary of the Incident Details as required in the EPA Reporting Guidelines**

No. Of Incidents in 2013	2
Number of Incidents reported to the EPA via EDEN in 2013	2 (all reported by Aidan Delaney, Executive Scientist)
Explanation of any discrepancies between the Two numbers above.	N/A

### **3.5 Sludge/Other Inputs to the WWTP**

**Table 15: Sludge/Other Inputs to Thurles WWTP**

<b>Input Type</b>	<b>m3/year</b>	<b>PE/year</b>	<b>% of load</b>
Domestic /Septic Tank Sludge	0	0	0
Industrial /Commercial Sludge	0	0	0
Landfill Leachate (delivered by Tanker)	6545m3/year		0.3%
Landfill Leachate (delivered by sewer network)	0	0	0
Other Specify Alum sludge from Drinking Water Supply Plant	325m3		0.014%



## **4.0 Infrastructural Assessment & Programme of Improvements**

### **4.1 Storm Water Overflow Identification and Inspection Report.**

Thurles Agglomeration contains the same stormwater overflows as identified during the WWDA Application Process. It is estimated that approximately 1% of Thurles Agglomerations flow and population equivalent overflows through these overflows i.e. 99% flows through the WWTP and is treated, the other 1% overflows at the various stormwater overflows.

### **4.2 Report on progress made and proposals being developed to meet the Improvement Programme Requirements.**

A process and optimisation review is underway in order to examine if improved compliance with the Orthophosphate ELV can be achieved utilising the existing infrastructure.

### **4.3 Sewer Integrity Risk Assessment**

The sewer integrity risk assessment for Thurles Agglomeration is attached in Appendix B.

A Summary of the Risk Assessment is presented below in Table 16 below

**Table 16: Summary of Sewer Integrity Risk Assessment**

<b>Element</b>	<b>Risk Ass Score</b>	<b>Risk Category</b>	<b>% Risk Score</b>	<b>Max Risk Score</b>
Section 2.1 Hydraulic Risk Assessment	<b>120</b>	<b>High Risk</b>	<b>80%</b>	<b>150</b>
Section 3.1 Env Risk Assessment	<b>235</b>	<b>Low Risk</b>	<b>47%</b>	<b>500</b>
Section 4.1 Structural Risk Assessment	<b>150</b>	<b>High Risk</b>	<b>100%</b>	<b>150</b>
Section 5.1 O&M Risk Assessment	<b>20</b>	<b>Low Risk</b>	<b>10%</b>	<b>200</b>
Total RAS for Network	<b>525</b>	<b>High Risk</b>	<b>53%</b>	<b>1000</b>

## 5.0 Licence Specific Reports

**Table 17 – Summary of Licence Specific Reports**

Licence Specific Report	Required in 2013 AER or outstanding from previous AER	Included in 2013 AER	Comments
Priority Substances Assessment	No	No	To be completed in 2014
Drinking Water Abstraction Point Risk Assessment	N/A	N/A	Not applicable to Thurles
Habitats Impact Assessment	N/A	N/A	Not applicable to Thurles
Shellfish Impact Assessment	N/A	N/A	Not applicable to Thurles
Pearl Mussel Report	N/A	N/A	Not applicable to Thurles
Toxicity/Leachate management	N/A	N/A	Not applicable to Thurles
Toxicity of Final Effluent Report	N/A	N/A	Not applicable to Thurles

**Table 18: Specified Improvement Programme (Schedule A and C) Summary Report**

Specified Improvement Programmes (under Schedule A and C of WWDL)	Licence Schedule (A or C)	Licence Completion Date	Date Expired? (n/na/y)	Status of Works	% Construction Work Completed	Licensee Timeframe for Completing the Work
				(i) Not Started (ii) At Planning Stage (iii) Work ongoing on-site (iv) Commissioning Phase (v) Completed (vi) Delayed		
Orthophosphate Reduction	C			(iii) Work ongoing on-site		

**Comment:**

A process and optimisation review is underway in order to examine if improved compliance with the Orthophosphate ELV can be achieved utilising the existing infrastructure.

**6.0 Certification & Sign Off**

I certify that this Annual Environmental Report (AER) for the reporting period 2013 for the Waste Water Discharge Licence No. D0326-01 in respect of Thurles Agglomeration is representative and accurate.

Signed: 

Dated: 21 March 2014

Mr. Jim McGuire,  
Senior Engineer,  
Water Services,  
North Tipperary Co. Council.

# Appendix A: PRTR Report



| PRTR# : D0026 | Facility Name : Thurles Waste Water Treatment Plant | Filename : Thurles.xlsm | Return Year : 2013 |

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[Guidance to completing the PRTR workbook](#)

# AER Returns Workbook

Version 1.1.17

<b>REFERENCE YEAR</b>	2013
-----------------------	------

## 1. FACILITY IDENTIFICATION

Parent Company Name	North Tipperary County Council
Facility Name	Thurles Waste Water Treatment Plant
PRTR Identification Number	D0026
Licence Number	D0026-01

Waste or IPPC Classes of Activity

No.	class_name
30.4	General

Address 1	Civic Offices
Address 2	Limerick Road
Address 3	Nenagh
Address 4	County Tipperary
Country	Ireland
Coordinates of Location	-7.837955886 52.65753961500
River Basin District	IESE
NACE Code	3700
Main Economic Activity	Sewerage
<b>AER Returns Contact Name</b>	Kevin McDonnell
<b>AER Returns Contact Email Address</b>	kmcdonnell@northtippcoco.ie
<b>AER Returns Contact Position</b>	Environmental Technician
<b>AER Returns Contact Telephone Number</b>	06746833
<b>AER Returns Contact Mobile Phone Number</b>	0870579426
<b>AER Returns Contact Fax Number</b>	06731773
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	2
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 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 ?	
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) ?	
--	--

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# : D0026 | Facility Name : Thurles Waste Water Treatment Plant | Filename : D0026\_2013 Thurles.xls | Return Year : 2013 ]

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**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
01	Methane (CH4)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0
02	Carbon monoxide (CO)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0
03	Carbon dioxide (CO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	322773.0	322773.0
05	Nitrous oxide (N2O)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	1.0	1.0
07	Non-methane volatile organic compounds (NMVOC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0
11	Sulphur oxides (SOx/SO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		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**

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

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						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 (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Thurles 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 engines	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# : D0026 | Facility Name : Thurles Waste Water Treatment Plant | Filename : D0026\_2013 Thurles.xls | Return Year : 2013 ]

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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 only concerns Releases from your facility

RELEASERS TO WATERS		Please enter all quantities in this section in KGs					
No. Annex II	POLLUTANT Name	M/C/E	Method Used Designation or Description Method Code	QUANTITY			
				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	0.004	0.004	0.0	0.0
17	Arsenic and compounds (as As)	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.551	0.57	0.0	0.019
27	Atrazine	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.016	0.016	0.0	0.0
62	Benzene	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.026	0.029	0.0	0.003
91	Benzo(g,h,i)perylene	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.003	0.003	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	0.079	0.083	0.0	0.004
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)	M	OTH Standard Methods for Water and Wastewater 21st Edition	121570.446	122599.988	0.0	1029.542
31	Chloro-alkanes, C10-C13	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.33	0.333	0.0	0.003
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	0.459	0.461	0.0	0.002
20	Copper and compounds (as Cu)	E	ESTIMATE EPA UWWTP Tool Version 5.0	4.85	4.94	0.0	0.09
82	Cyanides (as total CN)	E	ESTIMATE EPA UWWTP Tool Version 5.0	4.611	4.655	0.0	0.044
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	1.443	1.49	0.0	0.047
35	Dichloromethane (DCM)	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.071	0.073	0.0	0.002
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	0.041	0.041	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	0.026	0.028	0.0	0.002
88	Fluoranthene	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.004	0.004	0.0	0.0
83	Fluorides (as total F)	E	ESTIMATE EPA UWWTP Tool Version 5.0	380.448	383.966	0.0	3.518
40	Halogenated organic compounds (as AOX)	E	ESTIMATE EPA UWWTP Tool Version 5.0	3.754	3.792	0.0	0.038
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	0.012	0.012	0.0	0.0
23	Lead and compounds (as Pb)	E	ESTIMATE EPA UWWTP Tool Version 5.0	4.781	4.953	0.0	0.172
45	Lindane	E	ESTIMATE EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0

21	Mercury and compounds (as Hg)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.002	0.0	0.002
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	0.006	0.008	0.0	0.002
22	Nickel and compounds (as Ni)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	6.697	6.754	0.0	0.057
64	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.13	0.147	0.0	0.017
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	1.431	2.716	0.0	1.285
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	0.014	0.017	0.0	0.003
51	Simazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.022	0.022	0.0	0.0
52	Tetrachloroethylene (PER)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.093	0.093	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	0.776	0.997	0.0	0.221
12	Total nitrogen	M	OTH	Standard Methods for Water and Wastewater 21st Edition	12315.909	12688.959	0.0	373.05
76	Total organic carbon (TOC) (as total C or COD/3)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	14501.9	14710.065	0.0	208.165
13	Total phosphorus	M	OTH	Standard Methods for Water and Wastewater 21st Edition	1163.956	1232.195	0.0	68.239
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
75	Triphenyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
60	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	0.182	0.207	0.0	0.025
24	Zinc and compounds (as Zn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	77.645	79.582	0.0	1.937

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

**SECTION B : REMAINING PRTR POLLUTANTS**

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	Method Used		QUANTITY			
			Method Code	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)**

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs			
Pollutant No.	Name	M/C/E	Method Used		QUANTITY			
			Method Code	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	0.688	0.688	0.0	0.0
205	Antimony (as Sb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.243	0.251	0.0	0.008
368	Molybdenum	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.022	0.0	0.022
358	Tin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.17	0.17	0.0	0.0
373	Barium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	29.112	29.685	0.0	0.573



374	Boron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	98.897	100.311	0.0	1.414
356	Cobalt	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.276	0.281	0.0	0.005
386	Vanadium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	4.29	4.373	0.0	0.083
388	Dichlobenil	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.007	0.007	0.0	0.0
383	Linuron	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	0.168	0.17	0.0	0.002
380	2,4 Dichlorophenol (2,4 D)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.08	0.081	0.0	0.001
384	MCPA	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.139	0.139	0.0	0.0
382	Glyphosate	E	ESTIMATE	EPA UWWTP Tool Version 5.0	2.411	2.417	0.0	0.006
389	Benzo[a]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.003	0.003	0.0	0.0
390	Benzo[b]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.003	0.003	0.0	0.0
391	Benzo[k]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.003	0.003	0.0	0.0
392	Indeno[1,2,3-c,d]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.003	0.003	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	0.127	0.128	0.0	0.001
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	0.001	0.001	0.0	0.0
238	Ammonia (as N)	M	OTH	Standard Methods for Water and Wastewater 21st Edition	2013.329	2013.329	0.0	0.0
303	BOD	M	OTH	Standard Methods for Water and Wastewater 21st Edition	4451.344	4451.344	0.0	0.0
306	COD	M	OTH	Standard Methods for Water and Wastewater 21st Edition	17176.21	17176.21	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	OTH	Standard Methods for Water and Wastewater 21st Edition	7109.567	7109.567	0.0	0.0
372	Nitrite (as N)	M	OTH	Standard Methods for Water and Wastewater 21st Edition	139.989	139.989	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Standard Methods for Water and Wastewater 21st Edition	3098.639	3098.639	0.0	0.0
240	Suspended Solids	M	OTH	Standard Methods for Water and Wastewater 21st Edition	6496.131	6496.131	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# : D0026 | Facility Name : Thurles Waste Water Treatment Plant | Filename : D0026\_2013 Thurles.xls | Return Year : 2013 |

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**Please enter all quantities on this sheet in Tonnes**

5

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: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	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					
Within the Country	19 08 01	No	14.0	screenings	D5	E	Weighed	Offsite in Ireland	Ryan Bros Environmental ,NWCPO-08-10597-01	St Judes,Mill Road,Thurles,Tipperary,Ireland		
Within the Country	19 08 05	No	713.88	sludges from treatment of urban waste water	R10	M	Weighed	Offsite in Ireland	Hogan's Drain & Pipe Cleaning Ltd,WCP-OY-08-604-01	Limerick Road,Roscrea,Co. Tipperary,Tipperary,Ireland		

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

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)

[Link to Waste Guidance](#)

Appendix B:  
Sewer Integrity Risk  
Assessment

Section 1.1 Agglomeration Details						
Name		Thurles				
Licence Number		D0026-01				
Insert Name of Catchment if the Risk Assessment is for part of an agglomeration (only divide agglomeration where p.e. >5,000p.e. and where such division is warranted)		Thurles Agglomeration				
Date Licence Issued		13/09/2013				
Current Date		20/01/2014				
			Year	Year	Year	Year
			2013	2015	2018	2021
			Yes	Yes	Yes	Yes
<b>Waste Water Works - Wastewater Treatment Plant Details</b>		<b>Unit</b>				
1.1	Is there an existing WWTP in operation?		Yes	Yes	Yes	Yes
<b>Section 1.2 BOD Loading &amp; Population Equivalent</b>						
1.2	Average Daily Influent Flow or Average Total Flow in system (If no measured data exists, insert estimated figure)	l/day, measured	5940330			
1.3	Average Daily Influent BOD or Average BOD Load from area served (If no measured data exists, insert estimated figure)	mg/l, measured	119.09			
1.4	Total BOD Load	kg/day	707.4338997			
1.5	Average Population Equivalent (@0.06kg/person/day)	p.e.	11791			
1.6	Estimated (existing) Non-Domestic Load	p.e.	1180			
1.7	Estimated Domestic Load	p.e.	10611			
1.8	Occupancy Rate for the Agglomeration	pop/house	2.92			
1.9	Estimated Number of Connected Properties	houses	3634			
1.10	Number of properties within the agglomeration when compared with CSO Data or An Post Geodirectory	houses				
<b>Section 1.3 Hydraulic Details</b>						
1.11	Average Dry Weather Flow arriving at WWTP OR Total Average DWF in system (If no measured data exists insert estimated figure)	l/s, measured	41.94			
1.12	Estimated 3DWF	l/sec	125.82			
1.13	Annual Average Peak Flow to WWTP or discharging from whole system if there is no existing WWTP	l/s, measured	135.16			
1.14	This Annual Average Peak as Multiples of Dry Weather Flow (Peaking)	Nr	3.22			
1.15	Highest Peak Flow Recorded (Insert UNKNOWN if no records exist)	l/s	147.31			
1.16	Does this Peak Flow (multiple of DWF) cause hydraulic capacity problems within the network ?	---	No			
1.17	Total Rainfall for Previous Year	mm	808			
1.18	Comparison - Mean Annual Rainfall for the agglomeration	mm	804			
1.18.1	Define the Weather Station Used	Gurteen Agricultural College				
1.19	If Storm Water Storage is available at the Wastewater Treatment plant, what is the volume of the storm tank ?	m <sup>3</sup>	700			
1.20	Is the capacity of the storm tank sufficient to capture and retain all overflows to the tank ?	---	No			
1.21	Total monthly average volume of Storm Water Stored or Returned for Treatment within the Waste Water Treatment Plant	m <sup>3</sup> per month				
1.22	If the answer to 1.20 above is No, What is the estimated frequency of Overflows from the Storm Tank ? (N/A if no overflow)		< 1 per month			
<b>Waste Water Works - Sewer Network Details</b>		<b>Unit</b>	<b>2013</b>	<b>2015</b>	<b>2018</b>	<b>2021</b>
<b>Section 1.4 Waste Water Works - Gravity Sewer Details</b>						
1.23	What database is used to maintain records of the sewer network	Hard Copy Drawings only				
1.23.1	If other or combination of the above please describe	Describe				
1.24	Total length of sewers (use drop down menus to define whether these figures are estimated or measured)	km Estimated	#VALUE!	0.00	0.00	0.00
1.24.1	Total length of sewers > 450mm Diameter	km Estimated	Unknown			
1.24.2	Total length of sewers > 300mm but ≤ 450mm in Diameter	km Estimated	Unknown			
1.24.3	Total length of sewers > 225mm but ≤ 300mm in Diameter	km Measured	Unknown			
1.24.4	Total length of sewers ≤ 225mm in Diameter	km Estimated	Unknown			
1.24.5	Other	km Estimated	Unknown			
1.25	Pipeline Material					
1.25.1	What portion of the sewer network consists of Concrete Pipes	% Estimated				
1.25.2	What portion of the sewer network consists of Plastic Pipes	% Estimated				
1.25.3	What portion of the sewer network consists of Clay materials	% Estimated				
1.25.4	What portion of the sewer network consists of Brick Type Sewers	% Estimated				
1.25.5	What portion of the sewer network consists of Other Materials	% Estimated				
1.26	Total number of Storm Water Overflows (Enter '1' if none and state under Item 1.27 that there are no SWOs in the network; <b>do not leave blank</b> )	Nr	4			
1.27	What Screening or other mechanical devices are employed at the storm water overflows					
1.27.1	SWO No. _ located at _____	Describe				

	Stormwater Overflows are as described in Licence. Only TPEFF2800D0026SW005 is screened					
1.28	Water Quality at the receiving waters					
1.28.1	Where the receiving water is a river - indicate the EPA Biological Rating of the Receiving Water for each SWO below (Particularly if there is more than one receiving water within the agglomeration)					
	All SWOs discharge into Q3-Q4 Status Waters	Describe	Q3-Q4			
1.28.2	Where the receiving water is a coastal water indicate the Status of the Receiving Water for each SWO below (Particularly if there is more than one receiving water within the agglomeration)					
	No discharges to coastal areas	Describe	N/A			
1.28.3	With reference to the SWO's detailed above define if the receiving waters are sensitive in accordance with the Urban Wastewater Treatment Regulations as amended.					
	Only TPEFF2800D0026SW005 discharges into a sensitive area	Describe	Sensitive			
1.28.4	With reference to the SWO's detailed above define are the receiving waters Protected Areas (designated or awaiting designation) .					
	Only TPEFF2800D0026SW005 discharges into a designated area	Designation	SAC			
1.28.5	With reference to the SWO's detailed above define do the receiving waters have any other designations.					
	SWO 1 located at Main Street	Designation	Not Listed			
<b>Section 1.5 Waste Water Works - Pumping Stations</b>						
1.29	Number of Pumping Stations (operated by the Local Authority)	Nr				
1.30	Total Length of Rising Mains (operated by the Local Authority)	km	5			
1.31	Rising Main Material					
1.31.1	What portion of the rising mains consists of ductile iron pipes	% Measured	Unknown			
1.31.2	What portion of the rising mains consists of plastic pipes	% Measured	Unknown			
1.31.3	What portion of the rising mains consists of other materials	% Estimated	Unknown			
1.32	Discharge Capacity of the Pump Set (s) at normal duty point					
	At Pump Station 1 at "Centre Townland"	l/sec	Unknown			
1.33	What percentage of the pumping stations have recorded flow data (i.e. if all pumping stations have flow meters on the rising mains then this would read 100%)	%	40.00%			
1.34	Available Storage Capacity at Pump Stations					
	At Pump Station 1	m <sup>3</sup>	unknown			
1.35	Total Number of "Licenced Secondary Discharge Points and Stormwater Overflows" at pumping stations	Nr	2			
1.36	Total Number of "Emergency Overflow Points" at pumping stations	Nr	2			
1.37	What Screening or other mechanical devices are employed at the secondary discharge points or emergency overflows ?					
	None of the emergency overflows are equiped with screening	Describe	None			
1.38	Water Quality at the receiving waters at each pumping station location					
1.38.1	Where the receiving water is a river - indicate the EPA Biological Rating of the Receiving Water for each secondary discharge point or emergency overflow at each pumping station (Particularly if there is more than one receiving water within the agglomeration)					
	All emergency overflows from Pumping Station	Describe	Q3-Q4			
1.38.2	Where the receiving water is a coastal water indicate the Status of the Receiving Water for each secondary discharge point or emergency overflow at each pumping station (Particularly if there is more than one receiving water within the agglomeration)					
	No discharges to coastal waters	Describe	N/A			
1.38.3	With reference to the pumping stations, for each secondary discharge point or emergency overflow detailed above, define if the receiving waters are sensitive in accordance with the Urban Wastewater Treatment Regulations as amended.					
	All emergency overflows from Pumping Stations		Not Listed			

1.38.4	With reference to the pumping stations, for each secondary discharge point or emergency overflow detailed above, are the receiving waters Protected Areas (designated or awaiting designation) .					
	All emergency overflows from Pumping Stations	Designation	None			
1.38.5	With reference to the pumping stations, for each secondary discharge point or emergency overflow detailed above, do the receiving waters have any other designations.					
	All emergency overflows from Pumping Stations	Designation	Not Listed			
1.39	Estimated Number of Private Pumping Stations within the agglomeration (not operated by the Local Authority)	Nr	1			
<b>Section 1.6 Reporting</b>						
<b>Section 1.6.1 Reported Number of Sewer Related Complaints</b>						
1.40	Number of Reported Complaints	Nr	0			
1.41	Number of Reported Complaints which have been rectified	Nr	0			
<b>Section 1.6.2 Reported/Recorded/Estimated Number of Secondary Discharges</b>						
1.42	Number of Reported Secondary Discharges	Nr	0			
1.43	Number of Recorded Secondary Discharges	Nr	0			
1.44	Estimated Total Number of Secondary Discharges	Nr	0			
<b>Section 1.6.3 Reported/Recorded/Estimated Number of Emergency Overflow Discharges from Pumping Stations</b>						
1.45	Number of Reported Emergency Overflow Discharges	Nr	0			
1.46	Number of Recorded Emergency Overflow Discharges	Nr	0			
1.47	Estimated Total Number of Emergency Overflow Discharges	Nr	0			
<b>Section 1.7 Operational Staff</b>						
1.48	In the four boxes below, describe the extent of operation staff employed by the Local Authority to maintain and operate the sewer network and pumping stations					
1.48.1	For example, 1 Nr. Fulltime Caretaker employed at General Operative Level (with basis H&S training) to operate & maintain the sewer network. 1 Nr. Part-time Caretaker employed as a Mechanical Fitter (FETAC Level 5) to operate & maintain the pumping stations.					
1.48.2						
1.48.3						
1.48.4						
<b>Waste Water Works - Investment Details</b>						
		<b>Unit</b>	<b>2013</b>	<b>2015</b>	<b>2018</b>	<b>2021</b>
<b>Section 1.8 Capital Investment works carried out since most recent report (including works not included on WSIP Programme or not WSIP funded)</b>						
1.49	Sewers Upgraded or Replaced	m				
1.50	Sewers Rehabilitated	m				
1.51	Manholes Rehabilitated	Nr				
1.52	Local Repairs	Nr				
1.53	Total Length of sewers Upgraded, Replaced or Rehabilitated	m	0			
1.54	Pumping Stations Operated by Local Authority Upgraded or Repaired	Nr	0			
1.55	WWTW operated by Local Authority Upgraded or Replaced	Nr	0			
1.56	In the following two cells describe the actual Capital Investment undertaken in the reporting period.					
1.56.1	<i>For example : Sewer Rehabilitation Contract Works being undertaken under the WSIP</i>					
1.56.2						
<b>Section 1.9 Licence Specified Improvements Works</b>						
1.57	<i>The Local Authority is required to report on the extent of Improvement Works which have been specified under the Licence as issued by the EPA. Reference which AER contains this information</i>					
<b>Section 1.10 Other Updates Since Last Report</b>						
1.58	<i>For example : 50% of the sewer network is currently being upgraded under the WSIP with an investment of €1.5m in 2010.</i>					
1.59	<i>For example : 2% of the sewer network is currently being replaced under the Local Authorities Annual Maintenance Fund</i>					

1.60						
1.61						
1.62						
1.63						

## 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	<a href="#">Has a Hydraulic Performance Assessment been undertaken for the Sewer Network (e.g., Computer Model or other Engineering Design or Design Review) ?</a>	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 completion 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 ?	N/A	0		Select N/A response if no design assessment or design exists.
2.1.4	How many years has it been since the outcomes of the hydraulic assessment have been implemented ?	N/A	0		Select N/A response if no hydraulic performance assessment or design exists. For ongoing works select "less than 5".
2.2	<a href="#">Has a Dynamic Computer Model been used to Assess the Hydraulic Performance of the Sewer Network ?</a>	No	10		Computer Model means a Hydroworks/Infoworks Model, Micro-Drainage Model or equivalent.
2.3	<a href="#">Has a Manhole Survey been undertaken in accordance with WRc Documentation "Model Contract Document for Manhole Location Surveys and the Production of Record Maps" ?</a>	No	10		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?	N/A	0		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	<a href="#">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" ?</a>	No	20		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	<a href="#">What was this Flow Survey Information Used for ?</a>				
2.5.1	To Determine the extent of Problematic Sewer Catchments	N/A	0		Select N/A if no Flow Survey has been undertaken.
2.5.2	To Verify a Computer or Mathematical Model of the Network	N/A	0		Select N/A if no Flow Survey has been undertaken.
2.6	<a href="#">Have Performance Criteria been developed to determine the short, medium or long term capacity of the sewer network ?</a>	No	10		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	<a href="#">How many flood events resulting from surcharge in the network have occurred in the past 3 years?</a>	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	<a href="#">Are there deficiencies in performance criteria within the sewer network ?</a>	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	<a href="#">Have the causes of these deficiencies in the Performance Criteria been identified and rectified ?</a>	No	10		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	<a href="#">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</a>	No	10		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	<a href="#">Has an Impermeable Area Survey been carried out for the agglomeration or parts of the agglomeration ?</a>	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>120</b>		
2.12	<a href="#">Prepare Assessment of Needs &amp; Sewer Upgrade Implementation Plan</a>	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	<a href="#">What Environmental or Discharge Quality Data is available with regard to the sewer network ?</a>	up-to-date electronic or paper database exists	0		Select N/A if no discharges, secondary discharges or overflows from network; if discharges do exist complete Query 3.12
3.1.1	<a href="#">Do trade effluents discharge to the sewer network?</a>	Yes	20	st have character	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	<a href="#">Are there Storm Water Overflows within the network ?</a>	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	<a href="#">Are there Secondary Discharges within the network (excluding Emergency Overflows at Pump Stations)?</a>	No	0		If the answer is <b>No</b> , proceed to Query 3.1.4.
3.1.4	<a href="#">Is there any evidence that exfiltration is occurring from the network ?</a>	Unknown	20		If the answer is <b>No</b> , does all wastewater enter a wastewater treatment plant (insert summary details in the AER)? <b>Yes</b> , Proceed to Query 3.6
3.2	<a href="#">If Answer to Query 3.1.1 is "Yes", what % of trade effluents have a licence to Discharge to the Public Sewer ?</a>	0 - 10%	40	st majority Unlicen	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	<a href="#">Are all licenced trade Discharges compliant with their relevant licence and associated conditions</a>	No	10		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 Licence. If the answer is <b>Yes</b> , no further action is needed.
3.2.2	<a href="#">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)</a>	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	<a href="#">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?</a>	100%	0	erate in stormwat	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	<a href="#">Have samples from any Secondary Discharges within the system been analysed ?</a>	No	30		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	<a href="#">What percentage of discharges from the system are known to cause environmental pollution of the receiving waters ?</a>	None	0		If the answer is greater than 50% then detail, in the AER, the Improvement Programme necessary to reduce this percentage.
3.6	<a href="#">In relation to possible exfiltration has a risk analysis of ground water contamination or pollution been undertaken ?</a>	No	20		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	<a href="#">If Answer to Query 3.6 is "Yes", have any groundwater aquifers been identified in the area of the Network and/or Discharge Points?</a>	N/A	0		Select <b>N/A</b> if no risk analysis of groundwater contamination has been undertaken.
3.6.2	<a href="#">If Answer to Query 3.6.1 is "Yes", state the classification of groundwater aquifer identified in the area?</a>	N/A	0		Select <b>N/A</b> if no risk analysis of groundwater contamination has been undertaken.
3.6.3	<a href="#">In relation to Query 3.6.1, is the aquifer used as a source for Public, Private or Group Water Supply Schemes?</a>	N/A	0		Select <b>N/A</b> if no risk analysis of groundwater contamination has been undertaken.
3.7	<a href="#">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?</a>	No	40		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	<a href="#">What percentage of storm water overflows comply with the performance criteria referred to in Query 3.7?</a>	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	<a href="#">Have the causes of these Capacity Deficiencies (storm water overflows &amp; Secondary Discharges) been identified ?</a>	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 model
<b>Total Risk Assessment Score (RAS)</b>			<b>235</b>		
3.10	<a href="#">Prepare Assessment of Needs &amp; Sewer Upgrade Implementation Plan</a>	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	<a href="#">Has a CCTV Survey been undertaken in accordance with WRc Documentation "Model Contract Document for Sewer Condition Inspections" and "Manual of Sewer Condition Classification" ?</a>	No	10		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?	more than 10	0		If no CCTV has been undertaken, select "N/A" response
4.2	<a href="#">What was this CCTV Survey Information Used for?</a>	N/A	10		Select N/A if answer to Query 4.1 is NO.
4.3	<a href="#">Has the CCTV Survey been used to Assess the Structural Condition of the Sewer Network or targeted sections of the Sewer Network?</a>	No	5		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	<a href="#">Have Performance Criteria been developed to determine the short, medium or long term structural condition of the sewer network ?</a>	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)	unknown	30		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)	unknown	25		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)	unknown	10		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)	unknown	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)	unknown	5		Insert Percentage of Overall Network Length. If information is not available type "Unknown" into Prompt Box
<b>If all % lengths are known, Check Total Length = 100%</b>			<b>75</b>		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	<a href="#">What % of the deficiencies, as detailed in Items 4.4.1, 4.4.2 and 4.4.3, have been rectified ?</a>	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	<a href="#">Have the causes of the Structural Deficiencies (Grades 3, 4 and 5) been identified or is there a Preventative Maintenance Programme in place?</a>	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 Yes completed Query 4.7
<b>Total Risk Assessment Score (RAS)</b>			<b>150</b>		

4.7	<a href="#">Prepare Assessment of Needs &amp; Sewer Rehabilitation Implementation Plan</a>	In the AER Attach Assessment of Needs and Rehabilitation Implementation Plan as separate documents			
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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>	None	0		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>	None	0		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>	None	0		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>	unknown	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.
<b>Total Risk Assessment Score (RAS)</b>			<b>20</b>		
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	120	High Risk	80%	150
Section 3.1 Environmental Risk Assessment	235	Low Risk	47%	500
Section 4.1 Structural Risk Assessment	150	High Risk	100%	150
Section 5.1 O&M Risk Assessment	20	Low Risk	10%	200
<b>Total RAS for Network</b>	<b>525</b>	<b>High Risk</b>	<b>53%</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"