

SOUTH TIPPERARY COUNTY COUNCIL



CAHIR

WASTEWATER DISCHARGE LICENCE

REGISTER NUMBER D0167-01

ANNUAL ENVIRONMENTAL REPORT

1st JANUARY 2013 to DECEMBER 31st 2013

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1.0 INTRODUCTION and EXECUTIVE SUMMARY

1.1 Introduction

The Environmental Protection Agency on the 11th December 2012 granted South Tipperary County Council a Wastewater Discharge Licence (Register No D0167-01) in respect of the agglomeration named Cahir. One of the provisions of the licence (Condition 6.8) is that the Council submit to the Agency on an annual basis an 'Annual Environmental Report' (AER) to provide a summary of activities relevant to the discharges for that year. This is the second Annual Environmental Report (AER) for the Cahir Wastewater Treatment Plant and includes the information specified in Schedule D of the licence.

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

The Cahir Wastewater Treatment Plant is located at Clogheen Road south west of Cahir town and is designed to serve a population of 5,000. The present WWTP was first put into service in 1997 and a storm water holding facility and phosphorus dosing facility was added in 2005. The plant consists of a fine bubble diffused air extended aeration process with clarification, screening, grit removal and phosphorus removal. The plant operates a sludge thickening and dewatering facility.

Approximately 80% of the wastewater arising in the agglomeration is domestic in origin, with the remainder originating from Industrial and commercial sources. The primary discharge occurs into the River Suir. The primary discharge point SW001, discharges to the River Suir at 205003E, 123821N

The report presented below details the monitoring reports for influent and effluent loading at the WWTP along with the ambient upstream and downstream monitoring of the receiving water.

1.2 Executive Summary

The Cahir wastewater treatment plant has continued to operate effectively in this reporting period. The treatment plant is operated and managed on behalf of South Tipperary County Council by AECOM Ltd under a 20 year DBO contract agreement.

A review of the final effluent results and compliance with the Emission Limit Values set out in licence shows that there was no exceedence of the ELV for BOD which had an average effluent value of 3.0 mg/l against an ELV of 25 mg/l while Suspended Solids and COD had effluent values of 8 mg/l and 24 mg/l against ELV's of 35 mg/l and 125 mg/l respectively. The average effluent value for Ammonia was 1.06 mg/l against an ELV of 5mg/l. The annual mean effluent value for Soluble Reactive Phosphorus was 0.56 mg/l against a licence Emission Limit Value of 2 mg/l.

The total influent flow to the plant for the year was 318,577 m³ while the current flow weighted average influent BOD to the plant is 339 mg/l giving a current pe loading of the plant of 4,931 pe. This compares with a plant design of 5,000 pe.

The average daily influent flow for the year was 873m³ /day against a plant design of 1,253 m³/day which indicates that the plant is operating within it's hydraulic and treatment capacities.

A review of the ambient monitoring results for upstream and downstream of SW001 indicates that the discharge is having no adverse impact on the quality of the receiving waters.

The percentage reductions shown in the treatment efficiency report summary (Section 3) show that reductions of 99%, 97% and 97% were achieved in BOD, COD and Suspended Solids respectively.

A reduction of 98% was achieved in the Ammonia levels while nutrient removal efficiencies for TP and TN were 95% and 56 % respectively.

An analysis and interpretation of the final effluent results in given in Section 2.2 below.

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 Nitrogen, Total Phosphorus, Ammonia and pH. Also set out below is the calculation of the pe equivalent load and the flow weighted average BOD load for the WWTP.

Table 1: Waste water treatment plant influent monitoring results for 2013

	Flow	BOD	COD	SS	Ammonia	pH	TN	TP
ELV		25 mg/l	125 mg/l	35 mg/l	5 mg/l	6 to 9	n/a	n/a
8/1/2013	954	253	456	101	34.1	7.1	60	8.43
5/2/2013	1222	258	490	161	41.8	8.9	57	8.9
5/3/2013	887	490	931	222	51.2	7.3	85.4	13.71
16/4/2013	1002	328	634	278	39.6	7.3	56.3	8.6
8/5/2013	865	365	762	391	47	8.1	73.5	9.69
26/6/2013	684	315	748	187	58.2	7.1	85.4	12.6
2/7/2013	745	390	808	166	58.5	7.4	87.1	10.7
13/8/2013	718	500	1058	403	82.3	7.2	87.1	16.41
3/9/2013	614	360	761	273	60.5	7.4	88.5	16.71
8/10/2013	617	220	465	148	35.4	7.4	53.4	7.75
5/11/2013	679	340	562	160	39.8	7.6	70.2	16.8
17/12/2013	500	255	501	129	47.5	7.4	63.7	18.51
No of samples	12	12	12	12	12	12	12	12
Annual Max	1222	500	1058	403	60.5	8.9	88.5	18.51
Annual Mean	790.58	339.5	681.33	218.25	49.66	7.52	72.3	12.40

Calculation of the Population Equivalent load to the WWTP

The total influent for the year 2013 was 318,577m³.The average daily influent flow was 873 m³.

The flow weighted averaged influent BOD as calculated per Table 2 below is 339 mg/l

The Cahir population equivalent (p.e) was determined by the following formula:

Total Influent flow for 2013 x flow-weighted averaged influent BOD divided by (0.06x365x1000).

Therefore the pe = (318,577 x 339) / (0.06 x 365 x 1000) = **4,931**

Table 2: Calculation of the Flow weighted average BOD for 2013

Sample Date	Flow (m3/day)	cBOD (mg/l)	cBOD (Kg/day)
8/1/2013	954	253	241.4
5/2/2013	1222	258	315.3
5/3/2013	887	490	434.6
16/4/2013	1002	328	328.7
8/5/2013	865	365	315.7
26/6/2013	684	315	215.5
2/7/2013	745	390	290.6
13/8/2013	718	500	359
3/9/2013	614	360	221
8/10/2013	617	220	135.7
5/11/2013	679	340	230.9
17/12/2013	500	255	127.5
Total	9487		3215.9

The Flow weighted average BOD is $3215.9 \text{ Kg} \times 1000 / 9487 \text{ m}^3 = 339 \text{ mg/l}$

2.2 Discharges from the agglomeration

Presented below in Tables 3 and 4 are the primary discharge point monitoring effluent results for the parameters as set out in Schedule B of the licence and a summary of the effluent monitoring and overall compliance with the licence Emission Limit Values (ELV's).

Table 3: Tabular presentation of the wastewater treatment plant effluent monitoring results with the associated Emission Limit Values (ELV's).

Date	cBOD 5d with nitrification inhib (mg/l)	Chemical Oxygen Demand (mg/l)	Suspended Solids (mg/l)	Total Nitrogen as N (mg/l)	Total Phosphorus as P (mg/l)	Ammonia as N (mg/l)	pH (value)	Soluble Reactive Phosphorus
ELV	25 mg/l	125 mg/l	35 mg/l	mg/l	mg/l	5 mg/l	6 to 9	2 mg/l
08/01/2013	2	26	5	29.9	1.09	0.3	7.2	0.91
05/02/2013	3	19	9	15.6	0.2	1.2	7.3	0.06
05/03/2013	3	28	8	39.3	0.29	0.4	7.2	0.07
16/04/2013	3	20	3	34.3	0.19	1.5	7.0	0.04
08/05/2013	5	31	8	37	0.51	0.5	7.3	0.33
26/06/2013	2	19	7	42.2	0.22	1.3	7.1	0.03
02/07/2013	2	19	7	33.7	0.2	0.6	7.3	0.03
13/08/2013	3	20	10	30.6	2.17	0.8	7.1	1.79
03/09/2013	6	45	15	51.8	1.97	5.1	6.3	1.36
08/10/2013	2	23	9	40.3	0.39	0.7	7.1	0.18
05/11/2013	2	16	7	28.4	0.93	0.1	7.5	0.70
17/12/2013	4	26	8	45.2	0.35	0.2	7.4	0.15
No of Samples	12	12	12	12	12	12	12	12
Annual Max	6	45	15	51.8	2.17	5.1	7.5	1.79
Annual Mean	3	24	8	35.7	0.71	1.06	7.2	0.56

Table 4: Summary of the Effluent Monitoring and Compliance

	cBOD	COD	Suspended Solids	TN	TP	Ammonia	pH	Soluble Reactive Phosphorus
WWDL ELV	25 mg/l	125 mg/l	35 mg/l	n/a	n/a	5 mg/l	6 to 9	2 mg/l
No of sample results	12	12	12	12	12	12	12	12
No of sample results above ELV	0	0	0	n/a	n/a	1	0	0
No of sample results above ELV with Condition 2 interpretation	0	0	0	0	0	0	0	0
Overall Compliance	Pass	Pass	Pass	n/a	n/a	Pass	Pass	Pass

Interpretation of Results:

There was no exceedence of the ELV's for any the parameters set out in the discharge licence during this reporting period.

The upstream and downstream monitoring results (see Section 2.3) show that the final effluent discharge is not having any adverse impact on the receiving waters. A reduction of 98% was achieved in the Ammonia levels while nutrient removal efficiencies for TP and TN were 95% and 56% respectively.

Table 5: Cahir WWTP Primary discharge point daily flow recordings (m3/day) for 2013 as required under Schedule B (Monitoring) of the Discharge licence.

Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1	897	801	411	493	627	738	571	1447	602	1808	471	346
2	790	636	458	507	524	876	629	734	523	1364	659	387
3	651	638	460	511	811	606	971	1159	722	1791	661	818
4	773	1928	470	549	451	838	599	1161	581	694	403	416
5	799	1095	540	592	453	608	540	604	582	632	809	468
6	800	991	664	548	438	726	571	620	629	632	404	316
7	1279	852	728	548	921	670	573	700	681	633	368	328
8	873	1070	693	533	563	736	581	535	683	571	391	328
9	722	1070	1145	556	704	738	608	727	590	645	716	306
10	668	1264	1147	737	618	944	573	612	575	617	718	462
11	774	756	577	1077	620	1039	747	614	617	663	547	343
12	775	1275	522	521	586	1092	511	655	646	665	421	375
13	892	1858	481	647	573	512	678	663	613	610	618	379
14	799	1059	660	649	618	1363	680	720	713	538	401	786
15	1180	866	794	916	580	1183	679	1082	715	1252	375	788
16	1326	750	554	747	553	1183	748	856	1233	1200	443	306
17	1104	752	555	1098	1052	795	798	562	953	1243	445	330
18	6038	582	456	681	471	766	704	564	670	1450	380	1424
19	1448	533	378	540	473	728	876	627	553	1008	428	488
20	1446	420	448	976	487	833	870	648	592	1110	366	1180
21	786	445	1861	978	496	683	870	579	628	762	375	1132
22	824	472	3175	533	444	615	745	635	630	1142	461	1134
23	757	472	570	578	488	617	1156	659	566	506	374	884
24	981	464	571	814	1017	604	1135	658	614	1815	376	885
25	3713	407	787	583	1019	598	713	658	640	1170	351	883
26	1944	395	720	797	860	541	753	595	687	813	351	1291
27	1945	435	488	479	823	604	754	631	654	811	373	850
28	2948	433	561	481	1027	586	628	577	655	589	443	1787
29	1973		563	597	717	588	694	553	654	455	461	1789
30	1167		622	585	730	545	1160	641	1319	590	346	5734
31	690		623		738		1870	603		349		5197

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 8 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 at aSW-IU upstream of SW1 Cahir (E204982, N123920)

Station Location	Sample Date	Ammonia (N) mg/l	BOD mg/l	Dissolved Oxygen	Ortho-phosphate mg/l	pH Value	Temperature deg C
Upstream	17/01/2013	0.248	0.19	10.76	0.03	7.935	8.2
Upstream	12/02/2013	0.194	0.32	10.96	0.02	7.981	8
Upstream	20/03/2013	0.0951	0.19	10.75	0.02	8.188	7.9
Upstream	17/04/2013	0.0842	1.25	10.06	0.02	8.149	10.8
Upstream	26/06/2013	0.02	0.55	10.34	0.04	8.097	14.4
Upstream	17/07/2013	0.01	0.58	9.21	0.06	8.191	19.3
Upstream	22/08/2013	BLD	1.25	10.8	0.042	8.166	12.9
Upstream	26/09/2013	BLD	0.63	8.85	0.016	8.02	15.3
Upstream	17/10/2013	0.04	2.71	9.86	0.088	7.87	11
Upstream	19/11/2013	BLD	0.23	11.35	0.019	7.944	7.9
Upstream	04/12/2013	0.03	1.03	12.16	0.022	8.08	7.2
Max Value		0.248	2.71	12.16	0.088	8.191	19.3
Ave Value		0.066	0.81	10.46	0.034	8.06	11.17

Table 7 Ambient Monitoring downstream at aSW-ID downstream of SW1 Cahir (E205054, N123744)

Station Location	Sample Date	Ammonia(N) mg/l N	BOD mg/l	Dissolved Oxygen (Measurement) mg/l	Ortho- phosphate mg/l	pH	Temperature deg C
Downstream	17/01/2013	0.236	0.16	11.28	0.03	8.298	7.4
Downstream	12/02/2013	0.184	0.55	11.4	0.03	7.99	7.1
Downstream	20/03/2013	0.1033	0.54	11.89	0.02	8.173	7.3
Downstream	17/04/2013	0.0868	1.25	10.27	0.01	8.166	11.3
Downstream	26/06/2013	0.02	0.57	11.2	0.04	8.239	14.5
Downstream	17/07/2013	0.05	0.32	10.43	0.03	8.359	19.6
Downstream	22/08/2013	0.02	1.6	10.86	0.047	8.211	18
Downstream	26/09/2013	0.02	1.47	8.48	0.015	NT	15.5
Downstream	17/10/2013	0.05	2.87	10.33	0.089	7.9	11
Downstream	19/11/2013	0.04	0.16	11.42	0.023	7.962	8.4
Downstream	04/12/2013	0.05	0.57	12.1	0.026	8.1	7.4
	Max Value	0.236	2.87	11.89	0.089	8.359	19.6
	Average Value	0.08	0.91	10.88	0.03	8.11	11.17

Table 8: Ambient Monitoring Summary Table

Ambient Monitoring point from WWDL	Irish Grid Reference	EPA Feature Coding Tool code	Is discharge impacting on water quality
aSW-IU upstream of SW1	204982E, 123920N	RS16S021890	No
aSW-ID downstream of SW1	205054E, 123744N	RS16S021900	No

Interpretation:

A review of the ambient monitoring results carried out by the Environment Section of the Council confirms that the discharge is not having any significant impact on the quality of the receiving water. A Small Streams Risk Score (SSRS), which is a biological assessment designed to detect sources of pollution to watercourses was not carried out in 2013 as it was unsafe to enter the River Suir.

Impact on receiving waters and need for alternative monitoring point (*Condition 4.18 of the licence*).

An assessment of the impact of the discharge on the receiving waters was made by the Executive Chemist. This was in view of the requirement to relocate the downstream sampling point per Condition 4.18 of the licence. It is not possible to separate the discharges from an adjacent IPPC facility and the Cahir WWTP as the mixing zones of both cover the same stretch of river. The discharge loading from the Cahir WWTP is significantly lower than the adjacent IPPC discharge. Given the dilution available and given that the assimilative capacity available is substantial, combined with the level of treatment which includes phosphorous removal – means that the discharge from the Cahir WWTP is having no impact on the River Suir.

2.4 Data 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 the first quarter of 2014.

2.5 Pollutant Release and Transfer Register (PRTR)

The PRTR Emissions Data report workbook for 2013 for the Cahir WWTP has been sent to the EPA. A copy has been printed out and is attached in Appendix A of this report.

3.0 OPERATIONAL REPORTS SUMMARY.

3.1 Treatment Efficiency Report

Presented below in Table 9 is a summary of the efficiency reductions achieved in the treatment process for those parameters specified in the licence.

Table 9: Treatment Efficiency Report Summary Table

	cBOD	COD	SS	Ammonia	TN	TP
Influent Mass Loading (Kg/day)	296	594	190	43.4	63.1	10.8
Effluent Mass Loading (Kg/day)	2.3	19	6.3	0.83	28	0.56
% Efficiency Reduction	99%	97%	97%	98%	56%	95%

3.2 Treatment Capacity Report

Presented below in Table 10 is a summary of the current and the remaining treatment capacity of the treatment process.

Table 10: Treatment Capacity Report Summary Table

Hydraulic Capacity – Design	1253 m3/day
Hydraulic Capacity – Current Loading	873 m3/day
Hydraulic Capacity – Remaining	380 m3 /day
Organic Capacity – Design (pe)	5,000 pe
Organic Capacity – Current Loading (pe)	4,931 pe
Organic Capacity – Remaining (pe)	69 m3 /day
Will the capacity be exceeded in the next 3 years	No (based on 3 DWF capacity of the plant)

3.1 Complaints summary

There were no complaints of an environmental nature related to the discharge to water from the Cahir Wastewater treatment Plant in 2013.

Table 11: Complaints

Number	Date and Time	Nature of Complaint	Cause of Complaint	Actions taken to resolve issue	Closed (Y/N)
N/A	N/A	None	None	N/A	N/A

3.2 Reported Incidents Summary

There was no recorded incidents in relation to the Cahir Wastewater Treatment Plant in 2013.

Table 12: Incidents Summary

Date and Time	Incident Description	Cause	Corrective Action	Authorities Contacted	Reported to EPA	Closed (Y/N)
N/A	None	None	N/A	N/A	N/A	N/A

Table 13: A summary of the incident details as required in the EPA reporting guidelines is set out below

No of Incidents in 2013	None
Number of Incidents reported to the EPA via EDEN in 2013.	None
Explanation of any discrepancies between the Two numbers above.	N/A

4.0 INFRASTRUCTURAL ASSESSMENT & PROGRAMME OF IMPROVEMENTS

4.1 Storm Water Overflow Identification and Inspection Report

It was not possible to undertake a complete Storm Water Overflow Identification and inspection Report in this reporting period. A complete inspection and report will be included in the AER for submission for 2014.

4.2 Report on progress made and proposals being developed to meet Improvement Programme requirements.

There were no specific Improvement Programme Works set out in the licence and there are no specific Improvement Works proposed or detailed at this time. An update on this will be provided to the Agency (EPA) in the AER submission for 2014.

4.3 Sewer Integrity Risk Assessment

A sewer integrity risk assessment (see Appendix B) for the Cahir Agglomeration was undertaken. This involved a review of the existing sewer plans, agglomeration flows and loading and a visual examination of the existing network in a number of areas

A summary of the Risk Assessment is presented below in Table 14 below

Table 14: Summary of Sewer Integrity Risk Assessment

Element	Risk Ass Score	Risk Category	% Risk Score	Max Risk Score
Section 2.1 Hydraulic Risk Assessment	105	High	70 %	150
Section 3.1 Env Risk Assessment	189	Low	38 %	500
Section 4.1 Structural Risk Assessment	150	High	100 %	150
Section 5.1 O and M Risk Assessment	40	Low	20 %	200
Total RAS for Network	484	High	48 %	1000

Funding is being sought through budget submissions for 2014 for funds that will allow a more comprehensive and detailed assessment of the sewers to the standards set out in the Sewer Integrity Risk Assessment Tool facility.

5.0 LICENCE SPECIFIC REPORTS

5.1 Priority Substances Assessments

The requirement for a risk based assessment to identify the possible presence of priority substances will be reviewed and reported upon to the Agency by the licensee as part of the AER report due for 2014.

6.0 CERTIFICATION AND SIGN OFF

I certify that this Annual Environmental Report (AER) for the reporting year 2013 for the Waste Water Discharge Licence No D0167-01 in respect of the Cahir Agglomeration is representative and accurate.

Signed



Dated: 28/04/14

Mr Jimmy Harney

Acting Director of Services

Environment and Water Services

South Tipperary County Council

Appendix A

AER / PRTR Emissions Data

Guidance to completing the PRTR workbook

AER Returns Workbook

Version: 1.1.17

REFERENCE YEAR	2013
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1. FACILITY IDENTIFICATION

Parent Company Name	South Tipperary County Council
Facility Name	Cahir Waste Water Treatment Plant
PRTR Identification Number	D0167
Licence Number	D0167-01

Waste or IPPC Classes of Activity

No.	class_name
30.4	General

Address 1	County Hall
Address 2	Clonmel
Address 3	Co. Tipperary
Address 4	
Country	Ireland
Coordinates of Location	-7.92916 52.3675
River Basin District	IESE
NACE Code	3700
Main Economic Activity	Sewerage
AER Returns Contact Name	Denis Holland
AER Returns Contact Email Address	denis.holland@southtippcoco.ie
AER Returns Contact Position	Senior Engineer
AER Returns Contact Telephone Number	052 61 34410
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	051 61 26710
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	8
User Feedback/Comments	There was no PRTR submission for 2012 for the Cahir Agglomeration as the Licence was only issued in December 2012 and the EPA advised that none was required. There are therefore no variances between 2012 and 2013 to report.
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?	
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)?	
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This question is only applicable if you are an IPPC or Quarry site

4.2 RELEASES TO WATERS

Link to previous years emissions data

[PRTR] 20167 | Facility Name: Caltex Water Treatment Plant | Filename: D0167_2016.xls | Report Year: 2013

03/03/2014 12:23

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

No.	Name II	POLLUTANT	Mixture	M/C/E	Method Code	Method Used (Designation or Description)	QUANTITY		
							Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
34		1,2-dichloroethane (EDC)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
25		Aldrin		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
26		Aldrin		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
61		Atrazine		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
17		Aromatic and compounds (ar Ac)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
27		Atrazine		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
82		Beclazone		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
91		Benz(o,g,h,i)pyrene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
18		Brominated diphenylethers (BDOE)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
28		Carbazon and compounds (ar Ccb)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
26		Chlordane		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
29		Chlordane		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
30		Chlorimiphos		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
79		Chlorides (as Cl)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
31		Chloro-sarvast. C10-D13		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
32		Chlorpyrifos		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
16		Chromium and compounds (as Cr)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
29		Copper and compounds (as Cu)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
82		Cyanidris (as total CN)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
33		DDT		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
70		Di-(2-ethyl hexyl) phthalate (DEHP)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
35		Dichloromethane (DCM)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
36		Dieldrin		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
37		Dibacon		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
38		Endosulfath		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
39		Endrin		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
65		Ethyl benzene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
88		Fluoranthene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
83		Fluorides (as total F)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
40		Halogenated organic compounds (as AOX)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
41		Heptachlor		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
90		Hexabromobiphenyl		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
42		Hexachlorobenzene (HCB)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
43		Hexachlorobutadiene (HCBd)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
69		Isodrin		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
24		Lead and compounds (as Pb)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
45		Lindane		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
23		Mercury and compounds (as Hg)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
46		Mirex		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
86		Naphthalene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
22		Nickel and compounds (as Ni)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
54		Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
87		Oxyphenols and Oxyphenol ethoxylates		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
85		Organotin compounds (as total Sn)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
48		Pentachlorobenzene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
45		Pentachlorophenol (PCP)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
71		Phenols (as total C)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
50		Polychlorinated biphenyls (PCBs)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
72		Polycyclic aromatic hydrocarbons (PAHs)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
53		Simazine		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
52		Tetrachloroethylene (PER)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
58		Tetrachloroethane (TCM)		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
73		Toluene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
12		Total nitrogen		E	OTH	EPA WWTP Tool	10220.0	0.0	0.0
75		Total organic carbon (TOC) (as total C or COD03)		E	OTH	EPA WWTP Tool	0.0	10220.0	0.0
13		Total phosphorus		M	OTH	EPA WWTP Tool	204.4	0.0	0.0
59		Towophene		E	OTH	EPA WWTP Tool	0.0	0.0	0.0
74		Tributyltin and compounds		E	OTH	EPA WWTP Tool	0.0	0.0	0.0

RELEASES TO WATERS

Please enter all quantities on this sheet in Tonnes

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 Receiving Facility EWC Code: Name and Licence/Permit No of Receiving Facility	Site Name / Address of Receiving Facility Name: Address of Receiving Facility	Name and License / Permit No. and Address of Final Receiver / 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 05	No	72.72	sludges from treatment of urban waste water	D8	M	Weighted	Offsite in Ireland	GD Recycling, WFP-TS-10-0002-02	Ballybois, Kilsheelan, Clonmel, Co. Tipperary, Ireland		
Within the Country	19 08 01	No	3.98	screenings	D8	M	Weighted	Offsite in Ireland	Mr Binnan, WCP/KK060808(A)	Luddenmore, Grange, Kilmalock, Co. Limerick, 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		Cahir				
Licence Number		D0167-01				
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)		Insert Catchment Name (e.g., Downtown Pumping Station network). Refer to Guidance Notes for rules on division of large agglomerations.				
Date Licence Issued		11/12/2012				
Current Date		28/02/2014				
			Year	Year	Year	Year
Waste Water Works - Wastewater Treatment Plant Details		Unit	2013	2015	2018	2021
1.1	Is there an existing WWTP in operation?		Yes	Yes	Yes	Yes
Section 1.2 BOD Loading & Population Equivalent						
1.2	Average Daily Influent Flow or Average Total Flow in system (If no measured data exists, insert estimated figure)	l/day, measured	872814			
1.3	Average Daily Influent BOD or Average BOD Load from area served (If no measured data exists, insert estimated figure)	mg/l, measured	339			
1.4	Total BOD Load	kg/day	295.883946			
1.5	Average Population Equivalent (@0.06kg/person/day)	p.e.	4931			
1.6	Estimated (existing) Non-Domestic Load	p.e.	986			
1.7	Estimated Domestic Load	p.e.	3945			
1.8	Occupancy Rate for the Agglomeration	pop/house	2.92			
1.9	Estimated Number of Connected Properties	houses	1351			
1.10	Number of properties within the agglomeration when compared with CSO Data or An Post Geodirectory	houses	1446			
Section 1.3 Hydraulic Details						
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	8.8			
1.12	Estimated 3DWF	l/sec	26.40			
1.13	Annual Average Peak Flow to WWTP or discharging from whole system if there is no existing WWTP	l/s, measured	49.5			
1.14	This Annual Average Peak as Multiples of Dry Weather Flow (Peaking)	Nr	5.63			
1.15	Highest Peak Flow Recorded (Insert UNKNOWN if no records exist)	l/s	74.9			
1.16	Does this Peak Flow (multiple of DWF) cause hydraulic capacity problems within the network ?	---	Yes	Yes	Yes	Yes
1.17	Total Rainfall for Previous Year	mm	953			
1.18	Comparison - Mean Annual Rainfall for the agglomeration	mm	1029.4			
1.18.1	Define the Weather Station Used		Moore Park			
1.19	If Storm Water Storage is available at the Wastewater Treatment plant, what is the volume of the storm tank ?	m ³	300			
1.20	Is the capacity of the storm tank sufficient to capture and retain all overflows to the tank ?	---	No	No	No	No
1.21	Total monthly average volume of Storm Water Stored or Returned for Treatment within the Waste Water Treatment Plant	m ³ per month	50			
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	< 1 per month	1 to 2 times per month	< 1 per month
Waste Water Works - Sewer Network Details		Unit	2013	2015	2018	2021
Section 1.4 Waste Water Works - Gravity Sewer Details						
1.23	What database is used to maintain records of the sewer network		Mapdrain	SUS 2001	SUS 2002	SUS 2003
1.23.1	If other or combination of the above please describe	Describe	Sewer Maps			
1.24	Total length of sewers (use drop down menus to define whether these figures are estimated or measured)	km Estimated	12.00	0.00	0.00	0.00
1.24.1	Total length of sewers > 450mm Diameter	km Estimated	2.00			
1.24.2	Total length of sewers > 300mm but ≤ 450mm in Diameter	km Estimated	3.00			
1.24.3	Total length of sewers > 225mm but ≤ 300mm in Diameter	km Estimated	2.50			
1.24.4	Total length of sewers ≤ 225mm in Diameter	km Estimated	4.50			
1.24.5	Other	km Estimated	0.50			
1.25	Pipeline Material					
1.25.1	What portion of the sewer network consists of Concrete Pipes	% Estimated	35%			
1.25.2	What portion of the sewer network consists of Plastic Pipes	% Estimated	57%			
1.25.3	What portion of the sewer network consists of Clay materials	% Estimated	5%			
1.25.4	What portion of the sewer network consists of Brick Type Sewers	% Estimated	2%			
1.25.5	What portion of the sewer network consists of Other Materials	% Estimated	1%			
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; do not leave blank)	Nr	8			
1.27	What Screening or other mechanical devices are employed at the storm water overflows	Bar/Mech Screens				
1.27.1	SWO No.002 located at Castle Street	Describe	Overflow at Manhole			

	At Pump Station 1 at Castle Street (Car Park)	Describe	Q4			
	At Pump Station 2 at Barrack Street		Q4			
	At Pump Station 3 at Abbey Lane		Q4			
	At Pump Station 4 at Abbey Street		Q4			
	At Pump Station 5 at Tipperary Road		Q4			
	At Pump Station 6 at Tipperary Road (Sr an gCuagh Housing)	Describe	N/A			
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)					
	At Pump Station 1 at Castle Street (Car Park)	Describe	N/A			
	At Pump Station 2 at Barrack Street		N/A			
	At Pump Station 3 at Abbey Lane		N/A			
	At Pump Station 4 at Abbey Street		N/A			
	At Pump Station 5 at Tipperary Road		N/A			
	At Pump Station 6 at Tipperary Road (Sr an gCuagh Housing)		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.					
	At Pump Station 1 at Castle Street (Car Park)		Not Listed			
	At Pump Station 2 at Barrack Street		Not Listed			
	At Pump Station 3 at Abbey Lane		Not Listed			
	At Pump Station 4 at Abbey Street		Not Listed			
	At Pump Station 5 at Tipperary Road		Not Listed			
	At Pump Station 6 at Tipperary Road (Sr an gCuagh Housing)		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).					
	At Pump Station 1 at Castle Street (Car Park)	Designation	N/A			
	At Pump Station 2 at Barrack Street		N/A			
	At Pump Station 3 at Abbey Lane		N/A			
	At Pump Station 4 at Abbey Street		N/A			
	At Pump Station 5 at Tipperary Road		N/A			
	At Pump Station 6 at Tipperary Road (Sr an gCuagh Housing)		N/A			
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.					
	At Pump Station 1 at Castle Street (Car Park)	Designation	Not Listed			
	At Pump Station 2 at Barrack Street		Not Listed			
	At Pump Station 3 at Abbey Lane		Not Listed			
	At Pump Station 4 at Abbey Street		Not Listed			
	At Pump Station 5 at Tipperary Road		Not Listed			
	At Pump Station 6 at Tipperary Road (Sr an gCuagh Housing)		Not Listed			
1.39	Estimated Number of Private Pumping Stations within the agglomeration (not operated by the Local Authority)	Nr	1			
	Section 1.6 Reporting					
	Section 1.6.1 Reported Number of Sewer Related Complaints					
1.40	Number of Reported Complaints	Nr	0			
1.41	Number of Reported Complaints which have been rectified	Nr	0			
	Section 1.6.2 Reported/Recorded/Estimated Number of Secondary Discharges					
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			
	Section 1.6.3 Reported/Recorded/Estimated Number of Emergency Overflow Discharges from Pumping Stations					
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			
	Section 1.7 Operational Staff					
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	1 Nr Local Authority (Cahir Town) Foreman and 1 Nr General Operative employed/assigned to Cahir Town main gravity sewer network					
1.48.2	1 No DBO Contractor Project Manager and 1 No Plant Operator					
1.48.3	along with Contracted Services to maintain pumping stations					
1.48.4	and associated rising mains					
	Waste Water Works - Investment Details	Unit	2013	2015	2018	2021
	Section 1.8 Capital Investment works carried out since most recent report (including works not included on WSIP Programme or not WSIP funded)					
1.49	Sewers Upgraded or Replaced	m	0			
1.50	Sewers Rehabilitated	m	0			
1.51	Manholes Rehabilitated	Nr	0			
1.52	Local Repairs	Nr	0			
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	No Sewer Rehabilitation Contract Works being undertaken under the WSIP					
1.56.2						
	Section 1.9 Licence Specified Improvements Works					
1.57	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	N/A				
	Section 1.10 Other Updates Since Last Report					
1.58		N/A				
1.59		N/A				
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	<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 No 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 Yes 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 onging 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>	No	10		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>	No	10		If the answer is No assess the need and cost benefit of undertaking a Manhole Survey and complete Query 2.12. If the answer is Yes 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	<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>	No	20		If the answer is No assess the need and cost benefit of undertaking a Flow Monitoring Survey and complete Query 2.12. If answer is Yes Proceed in 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	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	<u>Have Performance Criteria been developed to determine the short, medium or long term capacity of the sewer network ?</u>	No	10		If the answer is No assess the Future Needs of the Sewer Network and complete Query 2.12. If the answer is Yes 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>	1 to 3	5		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>	N/A	0		If the answer is No , Proceed to Query 2.10 and complete Query 2.12. If the answer is Yes 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 No , consider further examination of the hydraulic model (if available) and complete Query 2.12. If the answer is Yes 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 No , consider further development of the Hydraulic Assessment (or model if available) and complete Query 2.12. If the answer is Yes 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 No , 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.
Total Risk Assessment Score (RAS)			105		
2.12	<u>Prepare Assessment of Needs & 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>	largely anecdotal	20		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 No, proceed to Query 3.1.2. If the answer is Yes, Proceed to Query 3.2
3.1.2	<u>Are there Storm Water Overflows within the network ?</u>	Yes	20		If the answer is No, proceed to Query 3.1.3. If the answer is Yes, 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 No, 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 No, does all wastewater enter a wastewater treatment plant (insert summary details in the AER)? If Yes, 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>	71 - 80%	4		Select N/A if answer to Query 3.1.1 is No. 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>	No	10		Answer N/A if none of the trade effluents are licenced. Answer No if this information is unknown. If the answer is Unknown or No, consider issuing a direction to the relevant Licencee. If the answer is Yes, 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>	10 - 25%	10		Select N/A 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 & Criteria in relation to Storm Water Overflows", what % of storm water overflows in the system have been classified for their significance?</u>	N/A	0		If the answer is No, consider a review of each discharge within the sewer network complete and Query 3.11. If the answer is Yes, 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 No, consider examining the quality of each secondary discharge within the sewer network complete Query 3.11. If the answer is Yes, 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>	No	20		Select N/A if answer to Query 3.1.4 is NO. If the answer is No, 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 N/A 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 N/A 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>	N/A	0		Select N/A 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 & Criteria in relation to Storm Water Overflows" including setting performance criteria?</u>	No	40		If the answer is No, consider assessing the risk category of the receiving waters. If the answer is Yes, 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 No or if there are no SWOs in system. (Risk Score is locked at 0 if no SWOs in system is stated in Agglomeration Details)
3.9	<u>Have the causes of these Capacity Deficiencies (storm water overflows & Secondary Discharges) been identified ?</u>	No	15		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 No, consider further examination of the environmental
Total Risk Assessment Score (RAS)			189		
3.10	<u>Prepare Assessment of Needs & 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>	No	10		If the answer is No assess the need and benefit of undertaking CCTV Survey. If Yes Proceed to Query 4.2
4.1.1	How many years has it been since the completion of the CCTV Survey?	N/A	0		If no CCTV has been undertaken, select "N/A" response
4.2	<u>What was this CCTV Survey Information Used for?</u>	N/A	10		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>	No	5		If no CCTV has been undertaken, select "No" response. If the answer is No assess the need and benefit of undertaking an assessment of the Structural Condition of the Sewer Network. If the answer is Yes 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 No, 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 Yes 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
If all % lengths are known, Check Total Length = 100%			75		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 No. If the answer is No, Proceed to Query 4.6 If the answer is Yes, 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 No, consider further examination of the sewer network, the structural loading conditions, gradients and possible H ₂ S Formation. If Yes completed Query 4.7
Total Risk Assessment Score (RAS)			150		
4.7	<u>Prepare Assessment of Needs & 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>	Twice/yr	8		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>	Twice/yr	8		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>	Twice/yr	4		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>	Twice/yr	4		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>	Twice/yr	4		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>	0.01 - 0.05/km/yr	8		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>	Once/yr	4		Select the highest number of events in any 12 month period.
Total Risk Assessment Score (RAS)			40		
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	105	High Risk	70%	150
Section 3.1 Environmental Risk Assessment	189	Low Risk	38%	500
Section 4.1 Structural Risk Assessment	150	High Risk	100%	150
Section 5.1 O&M Risk Assessment	40	Low Risk	20%	200
Total RAS for Network	484	High Risk	48%	1000

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"