Midleton Agglomeration

Annual Environmental Report

1st January 2013 – 31st December 2013

Cork County Council – Water Services Zone 3

Issue 1

Environmental Protection Agency
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Licence Reg. No.	D0056-01

Scope and Purpose of the Report

Cork County Council holds a Waste Water Discharge Licence (Register No. D0056-01) for the Midleton Agglomeration. This licence was granted on 6st January 2011. The aim of this Annual Environmental Report (AER) is to provide a review of activities relevant to the discharge from the 1st January 2013 to the 31st December 2013.

The required scope of the report is outlined in Schedule D (Annual Environmental Report Content) of the Waste Water Discharge Licence.

Section 1. Executive Summary and Introduction to the 2013 AER

1.1 Summary Report on 2013

Midleton is a medium sized town located on the Owenacurra River, in the North East of Cork Harbour, approximately 13 miles to the east of Cork City.

The Midleton Waste Water Treatment Plant (WWTP) serves the town of Midleton and environs and is located in the townland of Garryduff to the south west side of Midleton. In 2013, the WWTP was under the administrative control of Cork County Council and was operated on their behalf by Electrical & Pump Services Ltd. (EPS Ltd). The operational contract with EPS Ltd is valid until April 2016.

Midleton WWTP provides secondary treatment by way of extended aeration followed by clarification. Screening and grit removal are provided in advance of this treatment. A further tertiary treatment process is provided by way of UV disinfection of the final effluent. Nitrification and denitrification are achieved by the inclusion of an anoxic zone in the aeration process. Phosphorus removal is also provided for by means of an anaerobic zone in the treatment process.

The original plant (Stream 1+2) was designed for a population equivalent of 10,000 P.E. with a BOD loading of 600kgs/day. The maximum hydraulic capacity of the plant was 90l/s. In early 2012, a third treatment stream (Stream 3) was constructed as part of planned improvement works. This has increased the hydraulic capacity of the Midleton WWTP to 120l/s. This is equivalent to 3 Dry Weather Flows (DWF). The Midleton WWTP has a current capacity of 15,000 P.E. with a BOD loading of 900kgs/day. The plant is hydraulically protected by the controlled pumping capacity of the three terminal pumping stations. These are Bailick 1, Bailick 2 and Dwyers Road. The influent flows typically range from 2 DWF to 3 DWF.

Treated effluent from the Midleton WWTP discharges after UV treatment to the Ballinacurra 1 Pumphouse through a 400mm/750mm treated effluent pipeline.

Treated effluent from Irish Distillers Ltd is discharged to a separate chamber in the Bailick 1 Pumphouse, from where it is pumped locally to the 750mm treated effluent pipeline, to discharge directly to the Ballinacurra 1 Pumphouse.

The combined treated effluents at the Ballinacurra 1 Pumphouse are pumped to the top of Rose Hill in Ballinacurra, from where they gravitate under pressure to a 2,000 m3 holding tank at Rathcoursey. This final effluent is discharged on an ebb tide to the North Channel Great Island via a diffuser pipe. This is the Primary Discharge Point for the Midleton Agglomeration ref; SW01 MIDL.

The Emission Limit Values (ELV) for the Primary Discharge at Rathcoursey are as follows:

- 5 Day Biochemical Oxygen Demand (BOD_5) 25 mg/l
- Chemical Oxygen Demand (COD) 125 mg/l
- Suspended Solids (SS) 35 mg/l
- Total Nitrogen 15 mg/l
- Orthophosphate (as P) 2 mg/l
- Ph 6.5-9.0
- Faecal Coliforms Geometric mean of < 250fc/100mls of sample and 95%ile<1000fc/100mls (based on a 50 sample rolling programme)

The same Emission Limit Values apply to the treated effluent from the Midleton WWTP, with the exception of Orthophosphate (as P), which does not apply.

The Midleton WWTP consistently produces a good quality final effluent which continues to satisfy the effluent quality standards required by the Discharge Licence. The average yearly results for the Midleton WWTP are summarised below. Similarly, the average yearly results for the Primary Discharge at Rathcoursey, which comprises the combined effluents from the Midleton WWTP and the I.D.Ltd WWTP, for 2013 and are as follows:

ELV	Midleton WWTP	Primary Discharge	Limits
• BOD	1.51mg/l	2.56 mg/l	25mg/l
• COD	16.5mg/l	21.4 mg/l	125mg/l
• SS	1.68mg/l	6.55 mg/l	35mg/l
• Total N	5.54mg/l	5.61 mg/l	15mg/l
• Orthophosphate as P		0.26 mg/l	2mg/l
• Ph	7.56	7.83	6.5-9.0

As can be seen, the final treated effluent values are well within the allowable limits under the Discharge Licence.

There are two separate UV systems on the outlet from the Midleton WWTP.
Streams 1+2 are treated using a Wedeco system and Stream 3 is treated using a Trojan system. The geometric mean and the 95%ile faecal coliform values for these streams, as well the Primary Discharge Point at Rathcoursey, which is sampled from the discharge pipe in the Ballinacurra 1 Pumphouse and is a split composite sample , are tabulated below.

	Geometric Mean	95%ile
Streams 1+2	37.1	810
Stream 3	96.4	3070
Ballinacurra 1 Pumphouse Sample A	508	36800
Ballinacurra 1 Pumphouse Sample B	581	23100

As can be seen, Streams 1+2 are fully compliant while Stream 3 is compliant with the geometric mean limit. The treated effluents at the Ballinacurra 1 Pumphouse, which should be identical, are not compliant with either the geometric mean or the 95%ile value. This subject will be discussed later on in the AER. The EPA have been informed of this non-compliance, which is on-going.

During 2013 a stormwater overflow monitoring system was installed and commissioned on the principal pumphouses within the Midleton Sewerage Scheme. These comprised Bailick 1, Bailick 2, Bailick 3, Ballinacurra 1, Ballinacurra 2 and Dwyers Road. This system has been operational since the 17th of June and, for the first time, provides an accurate record of stormwater overflows on the Midleton Sewerage Scheme. From the beginning of June 2013, there has been a total of 10 stormwater overflow events recorded during this period. These are summarised as follows;

Bailick 1	SW03MIDL	4 Overflow Events
Bailick 2	SW04MIDL	2 Overflow Events
Bailick 3	-	0 Overflow Events
Ballinacurra 1	-	0 Overflow Events
Ballinacurra 2	SW05MIDL	2 Overflow Events
Dwyers Road	SWO6MIDL	2 Overflow Events

A more detailed analysis of these stormwater overflows has been provided later in this report.

Section 2. Monitoring Reports Summary

2.1 Summary report on monthly influent monitoring

EPS Ltd are the operators of the Midleton WWTP. As part of the Operate Contract daily/weekly samples are taken of the influent for BOD, COD, SS TN and TP. On a monthly basis, a full suite of tests are carried out on behalf of the operator by City Analysts Ltd for BOD, COD, SS, TN and TP. In addition, BOD and TN samples are also analysed on a weekly basis by City Analysts Ltd. Daily samples of COD, SS, and Ph are analysed in house by EPS Ltd in the on-site laboratory.

The results tabulated below are the Influent Monitoring Summary Table for 2013.

	BOD (mg/l)	**COD (mg/l)**	**SS (mg/l)**	**TP (mg/l)**	**TN (mg/l)**	**Hydraulic Loading (m3/d)**	**Organic Loading (PE/day)**
Number of Samples	49	246	248	67	105		
Annual Max.	210	1195	942	9.64	45		
Annual Mean	110	335	230	5	19.9		

The results tabulated below are average monthly values for the Influent Samples

Table 2.1

Date 2013	cBOD mg/l	COD mg/l	SS mg/l	TP mg/l	TN mg/l
January	102	285	168	3.4	18.4
February	66	327	211	3.9	20.9
March	133	354	227	5.6	16.7
April	99	366	261	6.1	22
May	114	432	329	4.9	19
June	123	337	203	5.0	21
July	126	426	251	5.7	22
August	140	350	243	5.6	18.8
Sept	108	190	249	6.2	22.7
October	75	394	220	7	22
November	107	276	170	4	19
December	131	292	230	3	16.1
Average	**110**	**335**	**230**	**5**	**19.9**

2.2 Discharges from the agglomeration

Midleton WWTP Discharge

	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	Total P (mg/l)	Total N (mg/l)	Faecal Coiform Geometric Mean	Faecal Coliform 95%ile
WWDL ELV (Schedule A)	25	125	35	n/a	15	<250	<1000
ELV with Condition 2 Interpretation included	none	none	none	n/a	none	n/a	n/a
Number of sample results	21	21	21	n/a	21	51	51
Number of sample results above WWDL ELV	0	0	0	n/a	0	50 rolling sample	50 rolling sample
Number of sample results above ELV with Condition 2 Interpretation included	0	0	0	n/a	0	n/a	n/a
Annual Mean (for parameters where a mean ELV applies)	1.51	16.55	1.68	n/a	5.54	37.1 & 96.4	810&3070
Overall Compliance (Pass/Fail)	Pass	Pass	Pass	n/a	Pass	Pass&Pass	Pass&Fail

Note 1. The discharge from the Midleton WWTP is split into 2 streams (Streams 1+2 & Stream 3). Each separate stream has its own individual composite sampler. For BOD, COD analysis, etc. a pro rata combined sample is tested. The results tabulated above reflect this. However, for faecal coliform analysis the 2 streams are tested separately. The first figure in the table represents Stream 1+2 and the second Stream 3.

As can be seen, the quality of the treated effluent from the Midleton WWTP is very good and in full compliance with the emission limit values of the Discharge Licence, with one exception. The 95%ile value for Stream 3 exceeds the limit of 1000. This matter has been taken up with the plant operator, EPS Ltd, who have been in contact with the Trojan UV supplier with a view to increasing the intensity of the UV lamps to give a higher disinfection level. This matter will be monitored on an on-going basis to ensure compliance.

Midleton Agglomeration Primary Discharge

	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	Total P (mg/l)	Total N (mg/l)	Faecal Coiform Geometric Mean	Faecal Coliform 95%ile
WWDL ELV (Schedule A)	25	125	35	2	15	<250	<1000
ELV with Condition 2 Interpretation included	none	none	yes	none	none	n/a	n/a
Number of sample results	31	31	31	31	31	51	51
Number of sample results above WWDL ELV	0	0	1	0	0	50 rolling sample	50 rolling sample
Number of sample results above ELV with Condition 2 Interpretation included	0	0	1	0	0	n/a	n/a
Annual Mean (for parameters where a mean ELV applies)	2.56	21.38	6.55	0.257	5.61	507 & 581	36800 & 23100
Overall Compliance (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Fail & Fail	Fail & Fail

Note 1. The pH values of the final effluent are checked on a daily basis by the curator and are in full compliance with the ELV's. Based on the 31 compliance samples taken by the accredited Cork Co. Council laboratory at Inniscarra, the average pH for 2013 was 7.83 with 100% compliance.
Note 2. The final effluent is a combination of flows from the Midleton WWTP and the Irish Distillers Ltd WWTP.
Note 3. The final effluent is sampled using a composite sampler located at the Ballinacurra 1 Pumphouse, from where the final effluent is pumped before discharging to the Rathcoursey Holding Tank.
Note 4. The I.D. Ltd effluent is sampled on a weekly basis at the discharge point to a dedicated final effluent sewer before discharging to the Bailick 1 Pumphouse. The geometric mean of the faecal coliform results is 15.3 and the 95%ile is 3375.
Note 5. There is a marked deterioration in the Primary Discharge faecal coliform results from the two discharge points for the I.D. Ltd effluent and the Midleton WWTP effluent. The 750mm treated effluent pipe along the Bailick Road is subject to tidal flooding and the Bailick Road is closed to traffic on occasions as a result of this tidal flooding. Clearly, tidal waters inundate the 750mm treated effluent sewer on these occasions and this could be a contributory factor in the deterioration of the faecal coliform results. It is unlikely that this is the only reason and further investigations will be carried out in an effort to identify any other factors in this issue.

2.2.1 Mass Loading Measurement

- The average daily flow to the Midleton WWTP for 2013 was 6,750 m3/day
- The average daily strength of the influent in terms of BOD was 110 mg/l
- The UWWT Regulations define 1 Population Equivalent (P.E.) as the load resulting from 60g of BOD
- Assume 225l per person per day

2.2.2 BOD Loading

P.E. = (6750 x 1000 x 110) / (60 x 1000)
P.E. = 12,375

2.2.3 Hydraulic Loading

P.E. = (6750 x 1000) / 225
P.E. = 30,000

- The Mass Loading on the WWTP in terms of BOD is 12,375 P.E.
- The Mass Loading on the WWTP in terms of Hydraulic Loading is 30,000 P.E.
- WWTP Hydraulic Loading is 2.42 DWF.

2.3 Ambient monitoring summary

The Primary Discharge for the Midleton Waste Water Discharge Licence is the outlet from the Rathcoursey Holding Tank. This outlet pipe discharges to the North Channel of Cork Harbour at the North East corner of Great Island.

Based on 2012 data, the water quality status of the North Channel is moderate, while that of the Lower Harbour is good. Elevated dissolved inorganic nitrogen with subsequent slightly elevated chlorophyll levels are the reason for the designation. All other measured chemical parameters are in compliance with the relevant environmental quality standards. See Table.

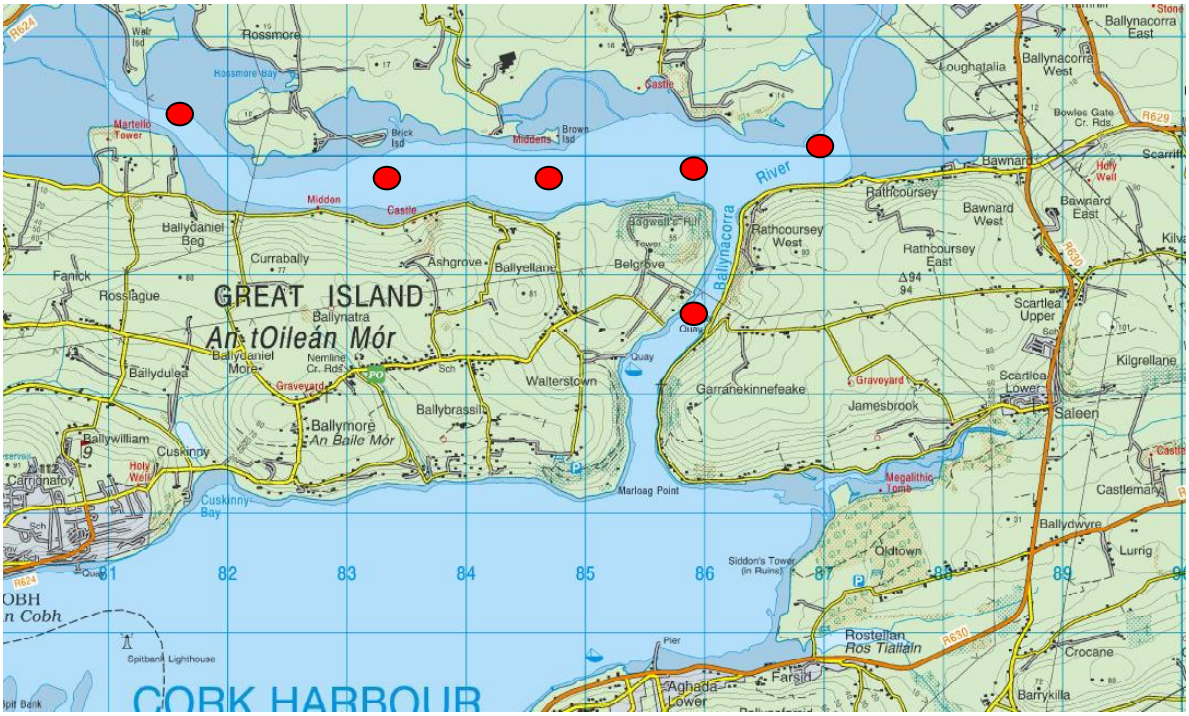

Fig 1: EPA monitoring Stations on North Channel

North Channel: Source 2012-2013 EPA Monitoring Programme of North Channel (S). Ref. Appendix 1.

Summary	DO %	BOD mg/l	PO_4-P mg/l	DIN mg/l	Chlorophyll µg/l	As µg/l	Cd µg/l	Cr µg/l	Cu µg/l	Pb µg/l	Hg µg/l	Ni µg/l	Ag µg/l	Zn µg/l
No of samples	106	57	107	107	25	2	2	2	2	2	2	2	2	2
Annual Mean	n/a	n/a	n/a	n/a	n/a	1.46	0.05	0.13	0.55	0.1	0.01	0.19	0.05	6.35
Median	n/a	n/a	n/a	n/a	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
90%ile Result	n/a	n/a	n/a	n/a	27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
95%ile Result	118	3	0.028	0.74		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Surface Water Regs[1] EQS "Other Surface Waters"	95%ile < 120% Saturation	≤ 4.0	≤ 0.04	Good Status= ≤0.25 High Status = ≤0.17	Median = 10 90%ile =20 for "good" waters	20	0.2	0.6	5	7.2	0.05	20	10	40
Surface Water Regs Compliant?	YES	YES	YES	**No**	**No**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ShellFish Regulations EQS[2]	≥ 70	n/a	n/a	n/a	n/a	40	5	30	10	20	0.4	200	10	200
ShellFish Regulations Compliant?	Yes	n/a	n/a	n/a	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

[1] European Communities Environmental Objecitves (Surface Waters) Regulations 2009 – 2012
[2] European Communities (Quality of Shellfish Waters) Regulations 2006

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

The effluent monitoring carried out by Cork County Council's accredited Wastewater Laboratory at Inniscarra included the Data Collection and Reporting Requirements under the UWWT Directive. The data collected has been submitted online to the EPA using the EDEN coding system. The Midleton WWTP data was uploaded to EDEN Code:TPEFF0500D0056SW001 and the Midleton Outfall data was uploaded to EDEN Code:TPEFF0500D0056SW100. Full compliance for all of the test parameters has been achieved in the tests required under the UWWT Directive.

2.5 Pollutant Release and Transfer Register (PRTR)

The PRTR Report has been submitted online.

Section 3 Operational Reports Summary

3.1 Treatment Efficiency report

	cBOD (kg/yr)	COD (kg/yr)	SS (kg/yr)	Total P (kg/yr)	Total N (kg/yr)	Comment
Influent mass loading (kg/year)	271,012	825,356	566,662	N/A	49,028	
Effluent mass emission (kg/year)	3,720	40,775	4,139	N/A	13,649	
% Efficiency (% reduction of influent load)	98.6%	95.1%	99.3%	N/A	72.2%	

3.2 Treatment capacity report

Hydraulic Capacity – Design / As Constructed (m3/year)	3,784,320
Hydraulic Capacity – Current loading (m3/year)	2,463,750
Hydraulic Capacity – Remaining (m3/year)	646,734
Organic Capacity - Design / As Constructed (PE)	15,000
Organic Capacity - Current loading (PE)	12,375
Organic Capacity – Remaining (PE)	2,625
Will the capacity be exceeded in the next three years? (Yes / No)	No

3.3 Extent of agglomeration summary report

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

3.4 Complaints Summary

Number	Date & Time	Nature of Complaint	Cause of Complaint	Actions taken to resolve issue	Closed (Y/N)
0	n/a	n/a	n/a	n/a	n/a

3.5 Reported incidents summary

Incident Type (e.g. Non-compliance, Emission, spillage, pollution incident)	Incident Description	Cause	No. of incidents	Corrective Action	Authorities Contacted Note 1	Reported to EPA (Yes/No)	Closed (Y/N)
Stormwater Overflow	Stormwater Overflow	Torrential Rainfall Town Flooded	3	Yes	Yes	Yes	Y
Stormwater Overflow	Stormwater Overflow	Adverse Weather	1	Yes	Yes	Yes	Y
Stormwater Overflow	Stormwater Overflow	Pump Trip or Telemetry fault	6	Yes	Yes	Yes	Y
Emission Exceedance	Faecal Coilforms	Under Investigation	2	Yes	Yes	Yes	N

In addition the following details must be provided:

Number of Incidents in 2013	12
Number of Incidents reported to the EPA via EDEN in 2013	12
Explanation of any discrepancies between the two numbers above	n/a

3.6 Sludge/other inputs to the WWTP

Input type	**m3/year**	**PE/year**	**% of load**
Domestic /Septic Tank Sludge	0	n/a	n/a
Industrial / Commercial Sludge	0	n/a	n/a
Landfill Leachate (delivered by tanker)	0	n/a	n/a
Landfill Leachate (delivered by sewer network)	0	n/a	n/a
Other (specify)			

Section 4 Infrastructural assessments and programme of improvements

4.1 Storm water overflow identification and inspection report

Preferred format for the SWO Identification and Inspection Summary Report Table A:

WWDL Name / Code for Storm Water Overflow	Irish Grid Reference	Included in Schedule A4 of the WWDL	Compliance with DoEHLG Criteria	No. of times activated in 2013 (No. of events)	Total volume discharged in 2013 (m3)	Total volume discharged in 2013 (P.E.)	Estimated /Measured data
SW03MIDL	187973E 073127N	Yes	Not yet assessed	4	9955		M
SW04MIDL	188045E 072514N	Yes	Not yet assessed	2	3049		M
SWO5MIDL	188520E 071783N	Yes	Not yet assessed	2	2872		M
SW07MIDL	188520E 071783N	Yes	Not yet assessed	2	28		M

Note 1. A stormwater monitoring and measuring system was installed as part of a planned Improvement Programme on the Midleton Sewerage Scheme in early 2013. This system was commissioned and operational by the 17th of June. All stormwater overflows have been notified to the EPA since that date.

Preferred format for the SWO Identification and Inspection Summary Report Table B:

How much sewage was discharged via SWOs in the agglomeration in the year (m3/yr)?	27264 m3 Pro rata for 12 month period
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2013?	1.1%
Is each SWO identified as non-compliant with DoEHLG Guidance included in the Programme of Improvements?	N/A
The SWO assessment includes the requirements of Schedule A3 & C3	N/A
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	Yes A Technical Amendment has been submitted with regard to SW07MIDL and overall spill volumes and frequency.

5.1 Report on progress made and proposals being developed to meet the improvement programme requirements

Preferred format for Specified Improvement Programme (Schedule A and C) summary report, to be submitted annually:

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 ((i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning Phase; (v) Completed; (vi) Delayed;)	% Construction Work Completed	Licensee Timeframe for Completing the Work	Comments
All Specified Improvement Works have been substantially completed	C	31st Dec 2011	Y	Completed	100	Completed	

A summary of the status of any improvements identified by the Licensee under Condition 5.2 must also be included. The suggested format for reporting this information is outlined below.

Improvement Identifier	Improvement Description	Improvement Source	Progress (% completed)	Expected Completion Date
Optimise Stormwater Storage and reduce Frequency of Overflows	**Pump Management System**	**Maximise pump output to WWTP and improve availability of existing Stormwater Storage following stormwater events**	**0%**	**Mid 2014** **Subject to funding**
		Sewer Integrity Tool (Condition 5.2).		
	Insert rows as required	*Secondary discharges assessment (Condition 5.2).*		
		SWO assessment (Condition 4 & 5.2).		
		Drinking Water Abstraction Risk Assessment (Condition 4)		
		Shellfish Impact Risk		

		Assessment (Condition 5)		
		Pearl Mussel Impact Assessment (Condition 4)		
		Improved Operational Control		
		Incident Reduction		
		Elimination/Reduction of Priority Substances		

Sewer Integrity Risk Assessment Tool Improvement Programme (Works) summary table:

The Improvement Programme should include an assessment of the integrity of the existing wastewater works for the following:	***Risk Assessment Rating (High, Medium, Low)***	***Risk Assessment Score***	***Reference to relevant section of AER (e.g. Appendix 2 Section4.***
Hydraulic Risk Assessment Score	*Medium Risk*	*97*	*Appendix 5*
Environmental Risk Assessment Score	*Low Risk*	*177*	*Appendix 5*
Structural Risk Assessment Score	*Medium Risk*	*90*	*Appendix 5*
Operation & Maintenance Risk Assessment Score	*Medium Risk*	*96*	*Appendix 5*
Overall Risk Score for the agglomeration	*Low Risk*	*460*	*Appendix 5*

Section 5 License specific reports

Licence Specific Report	**Required in 2013 AER or outstanding from previous AER**	**Included in 2013 AER**	*Reference to relevant section of AER (e.g. Appendix 2 Section4.*
Priority Substances Assessment	yes	Yes	Appendix 2
Drinking Water Abstraction Point Risk Assessment	no	no	n/a
Habitats Impact Assessment	no	no	n/a
Shellfish Impact Assessment	no	no	n/a
Pearl Mussel Report	no	no	n/a
Toxicity/Leachate Management	no	no	n/a
Toxicity of Final Effluent Report	no	no	n/a

Section 5.2 Drinking water abstraction point risk assessment

Preferred format for Drinking Water Abstraction Point Risk Assessment summary table:

	Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.
Is a Drinking Water Abstraction Risk Assessment required in the 2013 AER (or outstanding from a previous AER)	No
Does the Drinking Water Abstraction Risk Assessment identify whether any of the discharges in Schedule A of the licence pose a risk to a drinking water abstraction	n/a
Does the assessment identify if any other discharge(s) from the works pose a risk to a drinking water abstraction (includes emergency overflows)	n/a
What is the overall risk ranking applied by the licensee	n/a
Does the risk assessment consider the impacts of normal operation	n/a
Does the risk assessment consider the impacts of abnormal operation (e.g. incidents /overflows)	n/a
Does the risk assessment include control measures for each risk identified	n/a
Does the risk assessment include operational control measures e.g? incident notification to DW source	n/a
Does the risk assessment include infrastructural control measures	n/a
Does the Improvement Programme for the agglomeration include control measures / corrective actions to eliminate / reduce priority substances identified as having an impact on receiving water quality?	n/a

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under

Section 5.3 Shellfish impact assessment report

Preferred format for Shellfish Impact Assessment summary table:

Is a Shellfish Impact assessment required in the 2013 AER (or outstanding from a previous AER)?	No
List prescribed organisations consulted when preparing the assessment (BIM, SFPA, MI)	n/a
Does the assessment identify that any of the discharges from the works are impacting on the microbiological quality of the shellfish?	n/a
Does the assessment recommend that there is a requirement to install UV/other disinfection equipment on any of the discharges?	n/a
Provide details on disinfection system to be employed	n/a
Has this been completed?	n/a
If not yet complete what is the expected date for completion?	n/a
Where disinfection is required, is there a programme in place to demonstrate the efficiency of any disinfection system in place?	n/a
What is the demonstrated efficiency of the disinfection system?	n/a
Is there a shellfish monitoring programme in place?	n/a
Does the shellfish or shellfish water monitoring programme include results generated by other organisations	n/a
List organisations contributing data to the assessment	n/a
Does the Improvement Programme for the agglomeration include the findings and recommendations of the shellfish impact risk assessment?	n/a

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

Section 5.4 Toxicity/Leachate Management

Preferred format for Toxicity / Leachate Management Report summary table:

Is a Toxicity / Leachate Management Report required in the 2013 AER (or outstanding from previous AER)	No
What % of the total influent is leachate?	0
Does the study identify any constituents of the leachate that present an environmental risk?	n/a
List leachate constituent identified and impact *(insert a row for each constituent)*	n/a
Has the WWTP suitability to treat the leachate been assessed?	n/a
What are the results of the assessment (Suitable / Not Suitable / Suitable subject to improvement programme works completion)	n/a
Has the study identified the max and operational loadings (mass, volume and rate of addition) for leachate to the WWTP?	n/a
Is there a monitoring programme for the priority substances identified above?	n/a
Have trigger and action levels for the concentration of identified leachate constituents been established to prevent impact on the receiving water?	n/a
Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the impacts of leachate acceptance on the operation of the wwtp?	n/a

A copy of the detailed assessment can be included as an appendix to the AER.

Section 5.5 Toxicity/Leachate Management

Preferred format for Toxicity of the final effluent assessment summary table:

Is a Toxicity report required? (Condition 4)	No
Has the study been carried out against 4 species in 3 trophic levels?	No
Does the report identify that the discharge is toxic to any of the species in the study?	No
List species impacted	
Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the toxicity of the final discharge?	No

A copy of the detailed assessment can be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

Section 5.6 Toxicity/Leachate Management

Preferred formats for Pearl Mussel Measure Report summary table (check licence condition to see which format is appropriate):

Is a progress report on implementation of the findings of Pearl Mussel Protection Measures report required in the 2013 AER (or outstanding from previous AER)	No
Is there a Pearl Mussel Protection Measures Report for the receiving water body?	No
Include hyperlink to internet location of report	n/a
Does this report identify measures relevant to discharges from the works as having a potential impact on the Pearl Mussel water?	No

Section 5.7 Habitats impact assessment report

Preferred format for Habitats Impact Assessment summary table:

	Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.
Is a Habitats Assessment required in the 2013 AER (includes outstanding assessments from previous years)?	No
Was the scope of the study agreed in advance with NPWS	No
Does the report include a Stage 1 screening assessment?	No
Does the screening identify that discharges are causing an impact on listed sites?	No
Does the report require a Stage 2 Appropriate assessment?	No
Does the report identify any European Sites (e.g. SPA, SAC, NHA) that discharges from the works could have an impact on?	No
List European sites identified (insert a line for each site identified)	n/a
Does the report include mitigation measures for each identified impact?	No
Does each measure explain how the adverse impact will be avoided/reduced?	No
Does the Improvement Programme for the agglomeration include any procedural and/or infrastructural works to reduce the impacts of discharges on the a listed site (NHA, SAC, SPA)?	No

A copy of the detailed assessment should be included as an appendix to the AER. Where relevant, findings from this assessment should be considered under the Programme of Improvements required under Condition 5.

Section 4 Infrastructural assessments and programme of improvements

As part of the requirements of the WWDL, each licensee shall ensure that the AER report is certified as accurate and is representative by a nominated and suitably qualified person.

The AER must contain the following

Does the AER include an executive summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Is there a need to advise the EPA for consideration of a technical amendment / review of the licence?	Yes
List reason e.g. additional SWO identified *(insert lines as required)*	Grid reference for SWO7MIDL is incorrect. Spill frequencies and volumes to be reviewed
Is there a need to request/advise the EPA of any modifications to the existing WWDL? Refer to Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	Yes
List reason e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements *(insert lines as required)*	Grid reference for SWO7MIDL is incorrect. Spill frequencies and volumes to be reviewed
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	Yes
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	Yes
List outstanding reports *(insert lines as required)*	None

Midleton Agglomeration

Annual Environmental Report

2013

Certified by .....David Keane..... Date .....27/02/14.....
(See signed attachment)

Director of Water Services
Cork County Council
County Hall
Cork

Appendix 1

Effluent Monitoring Results

Cork County Council Laboratory Inniscarra

UWW Directive Monitoring

Primary Discharge Monitoring – SW01

Appendix 2

Faecal Coliform Results

Faecal Coliform Results for 2013

Date	Stream 1+2	Stream 3	Primary Discharge A	Primary Discharge B	I.D.Ltd	Owenacurra River
02/01/13	13	16	384	378	<3	2400
11/01/13	<10	<1	560	880	4600	930
18/01/13	2	<10	6000	<1000	4	4600
25/01/13	78	25	144	380	9	11000
30/01/13	26	12	1520	3480		230
08/02/13	29	45	1200	2560	<3	460
15/02/13	8	<1	<10	46	<3	150
22/02/13	26	20	96	126	7	200
27/02/13	47	96	340	568	<3	40
08/03/13	344	180	6400	6800	43	2400
15/03/13	72	42	80	116	150	930
22/03/13	64	208	3280	2400	<3	4600
27/03/13	3	3	1500	720	210	43
05/04/13	56	64	220	390	<3	90
12/04/13	42	1	1320	1380	1100	210
19/04/13	6	23	240	<10	<3	230
24/04/13	12	11	<100	<1000	43	430
03/05/13	72	54	2160	3000	1100	230
10/05/13	29	600	24000	21000	46000	430
17/05/13	2	140	49600	36000	46000	150
22/05/13	960	240	504	750	43	90
31/05/13	420	<10	2940	820	43	230
07/06/13	160	130	216	440	<3	4600
14/06/13	<10	>20000	<1	3000	150	1500
19/06/13	480	3540	2800	1620	240	930
28/06/13	11	8	480	<100	<3	430
05/07/13	120	318	258	276	<3	930
12/07/13	25200	62	<100	2400		930
17/07/13	780	50	<1000	<1000		230
26/07/13	140	680	<1000	13400		46000
02/08/13	33	248	1440	1120	93	2400
09/08/13	180	246	1040	640	4	930
14/08/13	250	184	114	48	<3	750
23/08/13	<1	110	3400	3400	<3	4600
30/08/13	<100	<100	52	<10	<3	4600
06/09/13	500	240	760	480	<3	1500
11/09/13	520	460	820	520	<3	930
20/09/13	40	960	120	320	<3	930
27/09/13	<100	<100	<100	<100	<3	2400

04/10/13	840	2200	50000	25200	<3	23
09/10/13	700	<100	3200	660	<3	4600
18/10/13	300	2600	1000	1100	23	11000
25/10/13	13	>20000	61600	62400	210	4600
01/11/13	6	1300	160	600	<3	930
06/11/13	18	576	<100	<100	<3	1500
15/11/13	<1	120	320	<1	<3	230
22/11/13	<1	120	<10	128	<3	90
29/11/13	<1	100	100	44	<3	460
04/12/13	1	62	<10	34	<3	430
13/12/13	5	900	90	<100	43	930
20/12/13	<1	<1	1700	1100	<3	930

Note 1. The samples of Stream 1+2 and Stream 3 are taken from the composite samplers on the outlet channels of the Midleton WWTP.
Note 2. The samples of Primary Discharge A and B are a split sample taken from the composite sampler in the Ballinacurra 1 Pumphouse, before discharging to the Rathcoursey Holding Tank. These results should be more or less identical.
Note 3. The sample of the I.D.Ltd final effluent is a grab sample taken directly from the discharge to a manhole at The Baby's Walk. As this is a pumped discharge there are occasions when there isn't any flow to the manhole.
Note 4. The samples taken from the Owenacurra River are grab samples taken just downstream of the Cork Road Bridge. There are no stormwater overflows in the Midleton Sewerage Scheme above this point.

Appendix 3

Priority Substances Testing

Appendix 4

PRTP Report

Appendix 5

Sewer Integrity Tool

Midleton Agglomeration

Annual Environmental Report

2013

Certified by ..... Date .....

Director of Water Services
Cork County Council
County Hall
Cork

Midleton Outfall WWDL D056-01 (combined effluents c

Sample		Effluent	Effluent	Effluent	Effluent	Effluent
Sample Code		GX003	GX011	GX047	GX048	GX102
Sample Location (Ballinacurra/F		Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra
Sample Date		02/01/2013	17/01/2013	30/01/2013	30/01/2013	12/02/2013
Sample Type		Composite	Composite	Composite	Grab	Composite
Flow M^3/Day		1681	7021	*	*	10167
pH		7.8	7.9	7.8	7.4	7.9
BOD mg/l		3.5	1.6	2.3	1.6	4.1
COD mg/l		22	10.5	10.5	22	10.5
Suspended Solids mg/L		14	3	6	8	4
O-PO4-P mg/l		0.1	0.07	0.06	0.06	0.33
Ammonia-N mg/l		0.3	0.4	0.05	0.05	0.7
TN-N mg/l		7.74	6.97	5.58	6.03	6.45
TON-N mg/l		4.88	3.65	3.8	4.02	3.17
Polychlorinated Biphenyls (PCB) ug/l						
Dissolved Metals	Arsenic ug/l					
	Cadmium ug/l					
	Chromium ug/l					
	Copper ug/l					
	Lead ug/l					
	Mercury ug/l					
	Nickel ug/l					
	Silver ug/l					
	Zinc ug/l					

Immediate Non-Compliance Notification to EPA requir

Immediate Notification to EPA **NOT** required

# of WWTP & IPPC site)

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX175	GX176	GX253	GX310	GX311	GX333	GX415	GX416
Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra
27/02/2013	27/02/2013	13/03/2013	27/03/2013	27/03/2013	09/04/2013	24/04/2013	24/04/2013
Composite	Grab	Composite	Grab	Grab	Composite	Composite	Grab
8832	*	10782	10268	10268	12716	*	*
7.8	7.7	7.8	7.7	7.6	7.8	7.8	7.7
1.6	2.9	0.5	3.3	3.3	6.4	1.7	2.7
10.5	30	10.5	10.5	10.5	24	57	10.5
3	12	5.0	4.0	3	5	43	6
0.025	0.025	0.025	0.27	0.26	0.025	0.11	0.18
0.2	0.2	0.9	2.5	2.5	1	1.3	1
4.1	3.7	5.3	6.6	6.4	4.7	6	5.1
2.86	1.47	2.51	2.98	2.98	2.19	3.23	2.75

ed — Half of LOD value for statistical purposes

collected by water services for licence analysis for specific parameters

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX458	GX533	GX534	GX556	GX631	GX670	GX735	GX799
Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra	Ballincurra
08/05/2013	22/05/2013	22/05/2013	05/06/2013	19/06/2013	02/07/2013	17/07/2013	31/07/2013
Composite	Composite	Grab	Composite	Composite	Composite	Composite	Composite
*	*	*	6432	*	6844	5129	5656
7.7	7.9	7.7	8.1	7.8	8	7.8	7.9
6	3.2	3.5	3.8	2	1.8	1.3	1.8
46	23	10.5	41	22	10.5	24	10.5
18	6	7	4	1.25	1.25	3	3.0
0.11	0.09	0.06	0.47	0.67	0.22	0.24	0.7
0.8	0.1	0.05	0.3	2.5	0.05	0.05	1.2
5.2	5.7	5.4	4.7	7	6.3	5.01	3.07
2.75	3.61	3.83	2.65	3.42	3.32	2.09	1.86

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX891	GX936	GX1022	GX1079	**water services**	GX1134	GX1195	GX1216
Ballinacurra	Ballinacurra	Ballinacurra	Ballinacurra	Ballinacurra	Ballinacurra	Ballinacurra	Ballinacurra
14/08/2013	27/08/2013	11/09/2013	25/09/2013	26/09/2013	09/10/2013	23/10/2013	06/11/2013
Composite	Composite	Grab	Composite	Composite	Grab	Grab	Composite
6901	9653	*	6630	*	*	10786	1086.7
8.1	8.0	7.7	8.0	*	7.8	7.9	7.8
1.7	1.5	2.5	1.5	*	5.2	0.5	1.9
22	21	36	32	*	39	23	10.5
7	1.25	5	4	*	12	1.25	4
0.13	1.41	1.2	0.36	*	0.07	0.06	0.06
0.05	0.05	1.1	0.1	*	0.2 (NFR)	0.4	0.3
6.3	7.52	3.87	7.02	*	5.32	5.1	5.4
3.42	2.03	0.6	1.32	*	0.62	1.67	0.86
				<0.05			
				<0.96			
				<0.09			
				<2.14			
				23.61			
				<0.38			
				<0.2			
				0.692			
				<0.33			
				31.32			

guidance result only

Effluent	Effluent	Effluent	Effluent	Mean Value	Emission Limit Value	% Compliance with ELV Limits Schedule A.1	% Compliance with Condition 2.1
GX1291	GX1405	**water services**	GX1465				
Ballinacurra	Ballinacurra	Ballinacurra	Ballinacurra				
21/11/2013	04/12/2013	16/12/2013	17/12/2013				
Composite	Composite	Composite	Composite				
9331	9018	*	9405	**7932**	**no value**		
8	8.1	*	7.8	**7.833333**	**6.5-9.0**		
1.6	1.5	*	2.6	**2.56**	**25**		
21	10.5	*	10.5	**21.38333**	**125**		
1.25	1.25	*	4	**6.55**	**35**		
0.18	0.14	*	0.025	**0.257**	**2**		
1.4	0.5	*	0.4	**0.698**	**no value**		
8.27	7.8	*	6.96	**5.614167**	**15**		
4.27	4.56	*	2.72	**2.779**			
		<0.05					
		0.404					
		0.067					
		1.06					
		14.59					
		2.974					
		0.172					
		<2.29					
		<0.33					
		75.46					

% Compliance with Schedule B4 Monitoring Frequency

Midleton WWTP Outlet- Stream 1 +2

Sample	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
Sample Co	GX001	GX009	GX045	GX103	GX173	GX257	GX308
Sample Da	########	########	30/01/2013	12/02/2013	27/02/2013	13/03/2013	27/03/2013
Sample Ty	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Flow M^3/Da	*	2870.4	*	3616.3	*	4120.9	*
pH	7.2	7.3	7.3	*	7.5	*	7.5
BOD mg/L	2.5	1.8	1.8	*	2.5	*	1.8
COD mg/L	10.5	10.5	10.5	*	22	*	10.5
Suspende	3	1.25	1.25	*	1.25	*	1.25
TN-N mg/l	6.88	9.54	5.8	4.4	3	3.5	5.5

exceeds Urban Wastewater Regulations Limits

half of LOD for statistical purposes

Midleton WWTP NEW WW STREAM- Stream 3

Sample	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
Sample Co	GX002	GX010	GX046	GX104	GX174	GX258	GX309
Sample Da	#########	#########	30/01/2013	12/02/2013	27/02/2013	13/03/2013	27/03/2013
Sample Ty	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Flow M^3/Da	*	958	*	2559	*	2566	*
pH	7.2	7.4	7.4	*	7.5	*	7.6
BOD mg/L	2	1.6	2.9	*	2.5	*	1.7
COD mg/L	10.5	10.5	10.5	*	23	*	10.5
Suspende	1.25	1.25	1.25	*	1.25	*	1.25
TN-N mg/l	8.32	6.52	7.83	4.4	7.1	8.8	5.6

Midleton WWTP Outlet Mixed sample Pro Rata

Sample	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
Sample Co	GX121	GX262	GX330	GX417	GX468	GX535	GX559
Sample Da	#########	#########	09/04/2013	24/04/2013	08/05/2013	22/05/2013	05/06/2013
Sample Ty	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata
Flow M^3/Da	6175.3	6686.9	7020.4	6066.7	6686.4	4667.2	4490.8
pH	7.6	7.6	7.5	7.6	7.7	7.6	8.1
BOD mg/L	1.4	0.5	2	2.4	2	1.8	1.4
COD mg/L	10.5	10.5	10.5	10.5	10.5	10.5	22
Suspende	1.25	3	4	1.25	4	1.25	1.25
TN-N mg/l	4.58	5.3	4.7	5	6.3	8.1	5.5

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX328	GX413	GX456	GX531	GX557	GX629	GX667	GX733
09/04/2013	24/04/2013	08/05/2013	22/05/2013	05/06/2013	19/06/2013	02/07/2013	17/07/2013
Composite	composite	Composite	Composite	Composite	Composite	Composite	Composite
*	3995.7	4333.4	2747.2	3033.8	3374	2658.5	2913
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
4.1	3.9	6.2	9.2	3.9	2.6	5.1	4.24

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX329	GX414	GX457	GX532	GX558	GX630	GX668	GX734
09/04/2013	24/04/2013	08/05/2013	22/05/2013	05/06/2013	19/06/2013	02/07/2013	17/07/2013
Composite	Composite	composite	composite	Composite	Composite	Composite	Composite
2471	2071	2353	1920	1457	1557	1398	1400
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
5.8	7.4	7.1	7	8.8	9.4	9.5	3.7

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX632	GX 669	GX736	GX802	GX892	GX935	GX1023	GX1086
19/06/2013	02/07/2013	17/07/2013	31/07/2013	14/08/2013	27/08/2013	11/09/2013	25/09/2013
Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata
4931	4056.5	4313	4284	4012.6	3879.2	3638	3787.4
7.5	7.7	7.6	7.5	7.4	7.7	7.4	7.4
2.2	1.4	1.3	2.3	0.5	2.5	0.5	1.3
21	10.5	26	10.5	10.5	23	28	28
1.25	1.25	1.25	1.25	1.25	3	1.25	1.25
4.8	6.3	4.23	3.61	6.93	6.02	4.87	5.49

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX800	GX889	GX933	GX1081	GX1135	GX1197	GX1214	GX1292
31/07/2013	14/08/2013	27/08/2013	25/09/2013	09/10/2013	23/10/2013	06/11/2013	21/11/2013
Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
2611	2625.6	2527.2	2480.4	2654.7	4370.9	6487.5	3556.4
*	*	*	*	*		*	
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
3.37	8.23	5.91	5.74	*	*	*	*

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
GX801	GX890	GX934	GX1082	GX1136	GX1198	GX1215	GX1293
31/07/2013	14/08/2013	27/08/2013	25/09/2013	09/10/2013	23/10/2013	06/11/2013	21/11/2013
Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
1673	1387	1352	1307	1404	2371.5	2325	1637
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
5.76	4.33	5.97	4.71	*	*	*	*

Effluent	Effluent	Effluent	Effluent	Effluent	Effluent		
GX1137	GX1206	GX1217	GX1310	GX1406	GX1470		
09/10/2013	23/10/2013	06/11/2013	21/11/2013	04/12/2013	17/12/2013		
Composite	Pro Rata	Pro Rata	Pro Rata	Pro Rata	Pro Rata	**Mean Value**	**UWW Reg Limits**
4058.7	6742.4	6487.5	5193.4	4763.5	5575.7	5119.838	
7.8	7.5	7.6	7.4	7.4	7.2	7.562	
2.1	1.2	0.5	1.1	1.2	2	1.505	25
36	10.5	27	10.5	10.5	10.5	16.548	125
1.25	1.25	1.25	1.25	1.25	1.25	1.679	35
3.94	5.11	5.6	8.04	5.5	6.44	5.541	15

		Mean value	UWW Reg Limits
Effluent	Effluent		
GX1403	GX1466		
04/12/2013	17/12/2013		
Composite	Composite		
3197.5	3742.7	**3395.9**	
*	*	**7.4**	
*	*	**2.1**	25
*	*	**12.8**	125
*	*	**1.6**	35
*	*	**5.3**	

		Mean value	UWW Reg Limits
Effluent	Effluent		
GX1404	GX1467		
04/12/2013	17/12/2013		
Composite	Composite		
1566	1833	1788.83	
*	*	7.42	
*	*	2.14	25
*	*	13.00	125
*	*	1.25	35
*	*	6.74	15

Fitz scientific
Monitoring and Testing Services

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Tel: +353 41 9845440
Fax: +353 41 9846171
Web: www.fitzsci.ie
email info@fitzsci.ie

A copy of this certificate is available on www.fitzsci.ie

Customer	**Tony Hickey** **Cork County Council** **Innishmore** **Ballincollig** **Co. Cork**	***Lab Report Ref. No.***	**1128/044/02**
		Date of Receipt	**26/09/2013**
		Sampled On	**25/09/2013**
		Date Testing Commenced	**26/09/2013**
		Received or Collected	**Courier: DPD**
		Condition on Receipt	**Acceptable**
Customer PO	**001096094**	***Date of Report***	**02/10/2013**
Customer Ref	**Middleton / Ballinacurra Pump Station**	***Sample Type***	**Trade Effluent**
Ref 2			

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Arsenic (Dissolved)	177	ICPMS	<0.96	ug/L	
Cadmium (Dissolved)	177	ICPMS	<0.09	ug/L	
Chromium (Dissolved)	177	ICPMS	<2.14	ug/L	
Copper (Dissolved)	177	ICPMS	23.61	ug/L	
Lead (Dissolved)	177	ICPMS	<0.38	ug/L	
Mercury (Dissolved)	178	ICPMS	<0.2	ug/L	
Nickel (Dissolved)	177	ICPMS	0.692	ug/L	
Polychlorinated Biphenyls	201	GCMS	<0.05	ug/L	
Silver (Dissolved)	177	ICPMS	<0.33	ug/L	
Zinc (Dissolved)	177	ICPMS	31.32	ug/L	

Signed : A Harmon ***Date : 02/10/2013***

Aoife Harmon - Technical Supervisor

Acc. : Accredited Parameters by ISO 17025:2005
PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)
All organic results are analysed as received and all results are corrected for dry weight at 104 C

Results contained in this report relate only to the samples tested
**The analytical result for this parameter may not be reflective of the concentration present at the time of sampling. The maximum recommended preservation time for this parameter has been exceeded.

Fitz scientific
Monitoring and Testing Services

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Drogheda,
Co. Louth
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Fax: +353 41 9846171
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email info@fitzsci.ie

A copy of this certificate is available on www.fitzsci.ie

Customer	**Tony Hickey** **Cork County Council** **Innishmore** **Ballincollig** **Co. Cork**	***Lab Report Ref. No.***	**1128/046/02**
		Date of Receipt	**17/12/2013**
		Sampled On	**16/12/2013**
		Date Testing Commenced	**17/12/2013**
		Received or Collected	**Courier: DPD**
		Condition on Receipt	**Acceptable**
Customer PO		***Date of Report***	**10/01/2014**
Customer Ref	**Ballinacura Direct Discharge - 16/12/13**	***Sample Type***	**Trade Effluent**
Ref 2	**PO 001112157**		

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Arsenic (Industrial Eff.)	177	ICPMS	0.404	ug/L	UKAS
Cadmium (Industrial Eff.)	177	ICPMS	0.067	ug/L	UKAS
Chromium (Industrial Eff.)	177	ICPMS	1.06	ug/L	UKAS
Copper (Industrial Eff.)	177	ICPMS	14.59	ug/L	UKAS
Lead (Industrial Eff.)	177	ICPMS	2.974	ug/L	UKAS
Mercury (Ind Effluent)	178	ICPMS	0.172	ug/L	UKAS
Nickel (Industrial Eff.)	177	ICPMS	<2.29	ug/L	UKAS
PCB 118	167	GCMS	<0.05	ug/L	
PCB 28	167	GCMS	<0.05	ug/L	
Polychlorinated Biphenyls	201	GCMS	<0.05	ug/L	
Silver	177	ICPMS	<0.33	ug/L	
Zinc (Industrial Eff.)	177	ICPMS	75.46	ug/L	UKAS

Signed : A Harmon ***Date : 10/01/2014***

Aoife Harmon - Technical Supervisor

Acc. : Accredited Parameters by ISO 17025:2005
PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)
All organic results are analysed as received and all results are corrected for dry weight at 104 C

Results contained in this report relate only to the samples tested
**The analytical result for this parameter may not be reflective of the concentration present at the time of sampling. The maximum recommended preservation time for this parameter has been exceeded.

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.17

REFERENCE YEAR	2013

1. FACILITY IDENTIFICATION

Parent Company Name	Cork County Council Southern Division
Facility Name	Midleton Waste Water Treatment Plant
PRTR Identification Number	D0056
Licence Number	D0056-01

Waste or IPPC Classes of Activity

No.	class_name
30.4	General

Address 1	County Hall
Address 2	Cork
Address 3	
Address 4	
	Cork
Country	Ireland
Coordinates of Location	-8.18157 51.9073
River Basin District	IESW
NACE Code	3700
Main Economic Activity	Sewerage
AER Returns Contact Name	Jack McCarthy
AER Returns Contact Email Address	cccwastewater@corkcoco.ie
AER Returns Contact Position	SEE
AER Returns Contact Telephone Number	0214285115
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	0214346254
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	2
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

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

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

Is it applicable?	
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# : D0056 | Facility Name : Midleton Waste Water Treatment Plant | Filename : D0056_2013 Midleton PRTR.xlsm | Return Year : 2013 | 28/02/2014 11:49

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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	0.0
02	Carbon monoxide (CO)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
03	Carbon dioxide (CO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	172539.0	0.0	172539.0
05	Nitrous oxide (N2O)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	1.0	0.0	1.0
07	Non-methane volatile organic compounds (NMVOC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	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	0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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	0.0

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

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

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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	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: Midleton 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: Method Code	Method Used: Designation or Description	Facility Total Capacity m3 per hour	
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

SECTION A : SECTOR SPECIFIC PRTR POLL

No. Annex II
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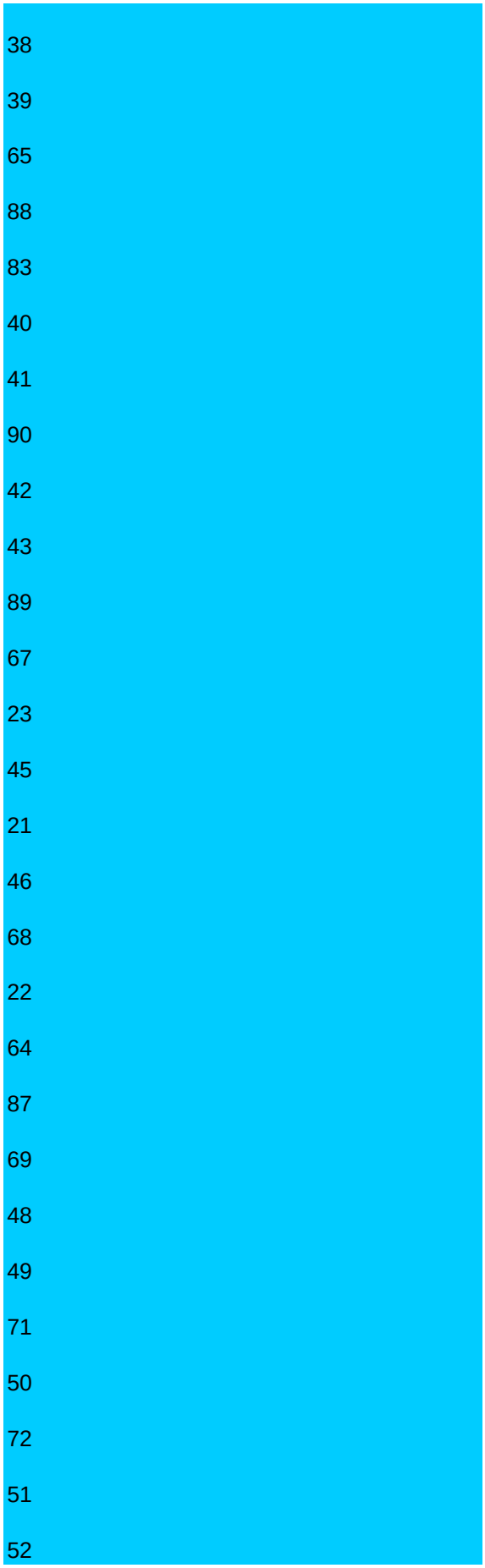
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SECTION B : REMAINING PRTR POLLUTANT

No. Annex II

SECTION C : REMAINING POLLUTANT EMIS

Pollutant No.
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Link to previous years emissions data | PRTR# : D(

.UTANTS Data on amb

RELEASES TO WATERS	
POLLUTANT	
Name	M/C/E
1,2-dichloroethane (EDC)	E
Alachlor	E
Aldrin	E
Anthracene	E
Arsenic and compounds (as As)	E
Atrazine	E
Benzene	E
Benzo(g,h,i)perylene	E
Brominated diphenylethers (PBDE)	E
Cadmium and compounds (as Cd)	E
Chlordane	E
Chlordecone	E
Chlorfenvinphos	E
Chlorides (as Cl)	E
Chloro-alkanes, C10-C13	E
Chlorpyrifos	E
Chromium and compounds (as Cr)	E
Copper and compounds (as Cu)	E
Cyanides (as total CN)	E
DDT	E
Di-(2-ethyl hexyl) phthalate (DEHP)	E
Dichloromethane (DCM)	E
Dieldrin	E
Diuron	E

Endosulphan	E
Endrin	E
Ethyl benzene	E
Fluoranthene	E
Fluorides (as total F)	E
Halogenated organic compounds (as AOX)	E
Heptachlor	E
Hexabromobiphenyl	E
Hexachlorobenzene (HCB)	E
Hexachlorobutadiene (HCBD)	E
Isodrin	E
Isoproturon	E
Lead and compounds (as Pb)	E
Lindane	E
Mercury and compounds (as Hg)	E
Mirex	E
Naphthalene	E
Nickel and compounds (as Ni)	E
Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	E
Octylphenols and Octylphenol ethoxylates	E
Organotin compounds (as total Sn)	E
Pentachlorobenzene	E
Pentachlorophenol (PCP)	E
Phenols (as total C)	E
Polychlorinated biphenyls (PCBs)	E
Polycyclic aromatic hydrocarbons (PAHs)	E
Simazine	E
Tetrachloroethylene (PER)	E

Tetrachloromethane (TCM)	E
Toluene	E
Total nitrogen	M
Total organic carbon (TOC) (as total C or COD/3)	E
Total phosphorus	M
Toxaphene	E
Tributyltin and compounds	E
Trichlorobenzenes (TCBs)(all isomers)	E
Trichloroethylene	E
Trifluralin	E
Triphenyltin and compounds	E
Vinyl chloride	E
Xylenes	E
Zinc and compounds (as Zn)	E

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

TS

RELEASES TO WATERS	
POLLUTANT	
Name	M/C/E

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

SIONS (as required in your Licence)

RELEASES TO WATERS	
POLLUTANT	
Name	M/C/E
Selenium	E
Antimony (as Sb)	E
Molybdenum	E
Tin	E
Barium	E
Boron	E
Cobalt	E

Vanadium	E
Dichlobenil	E
Linuron	E
Mecoprop Total	E
2,4 Dichlorophenol (2,4 D)	E
MCPA	E
Glyphosate	E
Benzo[a]pyrene	E
Benzo[b]fluoranthene	E
Benzo[k]fluoranthene	E
Indeno[1,2,3-c,d]pyrene	E
Carbon tetrachloride	E
2,6-Dichlorobenzamide	E
Dicofol	E
Hexabromocyclodecane (HBCD)	E
PFOS	E
Ammonia (as N)	M
BOD	M
COD	M
Kjeldahl Nitrogen	E
Nitrate (as N)	E
Nitrite (as N)	E
Ortho-phosphate (as PO4)	E
Suspended Solids	M

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

ient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should N

		Please enter all quantities in this section in KGs	
Method Used			
Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.005	0.005
ESTIMATE	EPA UWWTP Tool Version 5.0	0.654	0.654
ESTIMATE	EPA UWWTP Tool Version 5.0	0.02	0.02
ESTIMATE	EPA UWWTP Tool Version 5.0	0.031	0.031
ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.004
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.093	0.093
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	158633.937	158633.937
ESTIMATE	EPA UWWTP Tool Version 5.0	0.392	0.392
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.545	0.545
ESTIMATE	EPA UWWTP Tool Version 5.0	5.762	5.762
ESTIMATE	EPA UWWTP Tool Version 5.0	5.479	5.479
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	1.714	1.714
ESTIMATE	EPA UWWTP Tool Version 5.0	0.085	0.085
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.049	0.049

ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.031	0.031
ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.004
ESTIMATE	EPA UWWTP Tool Version 5.0	452.016	452.016
ESTIMATE	EPA UWWTP Tool Version 5.0	4.461	4.461
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.014	0.014
ESTIMATE	EPA UWWTP Tool Version 5.0	5.68	5.68
ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.007	0.007
ESTIMATE	EPA UWWTP Tool Version 5.0	7.957	7.957
ESTIMATE	EPA UWWTP Tool Version 5.0	0.155	0.155
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	1.7	1.7
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.017	0.017
ESTIMATE	EPA UWWTP Tool Version 5.0	0.026	0.026
ESTIMATE	EPA UWWTP Tool Version 5.0	0.11	0.11

ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.922	0.922
ALT	chemiluminescence	10353.152	10353.152
ESTIMATE	EPA UWWTP Tool Version 5.0	17229.911	17229.911
ALT	digestion+colorimetric	934.4	934.4
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.217	0.217
ESTIMATE	EPA UWWTP Tool Version 5.0	92.251	92.251

		Please enter all quantities in this section in KGs	
Method Used			
Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year
		0.0	0.0

		Please enter all quantities in this section in KGs	
Method Used			
Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year
ESTIMATE	EPA UWWTP Tool Version 5.0	0.818	0.818
ESTIMATE	EPA UWWTP Tool Version 5.0	0.289	0.289
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.202	0.202
ESTIMATE	EPA UWWTP Tool Version 5.0	34.588	34.588
ESTIMATE	EPA UWWTP Tool Version 5.0	117.501	117.501
ESTIMATE	EPA UWWTP Tool Version 5.0	0.328	0.328

ESTIMATE	EPA UWWTP Tool Version 5.0	5.097	5.097
ESTIMATE	EPA UWWTP Tool Version 5.0	0.008	0.008
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.2	0.2
ESTIMATE	EPA UWWTP Tool Version 5.0	0.095	0.095
ESTIMATE	EPA UWWTP Tool Version 5.0	0.166	0.166
ESTIMATE	EPA UWWTP Tool Version 5.0	2.864	2.864
ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.004
ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.004
ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.004
ESTIMATE	EPA UWWTP Tool Version 5.0	0.004	0.004
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.15	0.15
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001
ALT	colorimetric	1158.656	1158.656
ALT	electrochemical	2812.544	2812.544
ALT	digestion+colorimetric	30924.902	30924.902
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0
ALT	gravimetric	3137.715	3137.715

OT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

QUANTITY	
A (Accidental) KG/Year	F (Fugitive) KG/Year
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
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0.0	0.0
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QUANTITY	
A (Accidental) KG/Year	F (Fugitive) KG/Year
0.0	0.0

QUANTITY	
A (Accidental) KG/Year	F (Fugitive) KG/Year
0.0	0.0
0.0	0.0
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0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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	0.0

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
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	0.0

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

4.4 RELEASES TO LAND

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND	
POLLUTANT	
No. Annex II	Name

* Select a row by double-clicking on the Pollutant Name (Column B)

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

RELEASES TO LAND	
POLLUTANT	
Pollutant No.	Name

* Select a row by double-clicking on the Pollutant Name (Column B)

			Please enter all quantities
METHOD			
	Method Used		
M/C/E	Method Code	Designation or Description	Emission Point 1
			0.0

) then click the delete button

			Please enter all quantities
METHOD			
	Method Used		
M/C/E	Method Code	Designation or Description	Emission Point 1
			0.0

) then click the delete button

in this section in KGs	
QUANTITY	
T (Total) KG/Year	A (Accidental) KG/Year
0.0	0.0

in this section in KGs	
QUANTITY	
T (Total) KG/Year	A (Accidental) KG/Year
0.0	0.0

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 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	20.0	screenings	D1	M	Weighed	Offsite in Ireland	Midleton Skip Hire,WFP-CK-10-0052-01-A1,Knockgriffin,Midleton ,Co Cork,none,Ireland	Gortadroma Landfill Site,Ballyhahill,Co Limerick,".",Ireland		
Within the Country	19 08 05	No	300.0	sludges from treatment of urban waste water	R3	M	Weighed	Offsite in Ireland	Ormonde Organics,WFP-WD-10-0003-01	Killowen,Portlaw,Co Waterford,.,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

	Section 1.1 Agglomeration Details					
	Name	**Midleton Agglomeration**				
	Licence Number	**D0056**				
	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)	**Midleton Agglomeration**				
	Date Licence Issued	**06/01/2011**				
	Current Date	**11/02/2014**				
			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	10368000			
1.3	Average Daily Influent BOD or Average BOD Load from area served (If no measured data exists, insert estimated figure)	mg/l, measured	250			
1.4	Total BOD Load	kg/day	2592			
1.5	Average Population Equivalent (@0.06kg/person/day)	p.e.	43200			
1.6	Estimated (existing) Non-Domestic Load	p.e.	150			
1.7	Estimated Domestic Load	p.e.	43050			
1.8	Occupancy Rate for the Agglomeration	pop/house	2.92			
1.9	Estimated Number of Connected Properties	houses	14743			
1.10	Number of properties within the agglomeration when compared with CSO Data or An Post Geodirectory	houses	4000			
	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	40			
1.12	Estimated 3DWF	l/sec	120.00			
1.13	Annual Average Peak Flow to WWTP or discharging from whole system if there is no existing WWTP	l/s, measured	120			
1.14	This Annual Average Peak as Multiples of Dry Weather Flow (Peaking	Nr	3.00			
1.15	Highest Peak Flow Recorded (Insert UNKNOWN if no records exist)	l/s	120			
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	1200			
1.18	Comparison - Mean Annual Rainfall for the agglomeration	mm	1100			
1.18.1	Define the Weather Station Used		Cork Airport			
1.19	If Storm Water Storage is available at the Wastewater Treatment plant, what is the volume of the storm tank ?	m^3	0			
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	0			
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)		N/A	< 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		SUS 2000	SUS 2001	SUS 2002	SUS 2003
1.23.1	If other or combination of the above please describe	Describe	S2000 & AutoCad			
1.24	Total length of sewers (use drop down menus to define whether these figures are estimated or measured)	km Estimated	6.15	0.00	0.00	0.00
1.24.1	Total length of sewers > 450mm Diameter	km Estimated	0.15			
1.24.2	Total length of sewers > 300mm but ≤ 450mm in Diameter	km Estimated	1.00			
1.24.3	Total length of sewers > 225mm but ≤ 300mm in Diameter	km Measured	2.00			
1.24.4	Total length of sewers ≤ 225mm in Diameter	km Estimated	3.00			
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	70%			
1.25.2	What portion of the sewer network consists of Plastic Pipes	% Estimated	20%			
1.25.3	What portion of the sewer network consists of Clay materials	% Estimated	10%			
1.25.4	What portion of the sewer network consists of Brick Type Sewers	% Estimated	0%			
1.25.5	What portion of the sewer network consists of Other Materials	% Estimated	0%			
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	30			
1.27	What Screening or other mechanical devices are employed at the storm water overflows					
1.27.1	SWO No. 1 *located at Bailick 1*	SWO with screen				
1.27	SWO No. 2 *located at Bailick 2*	SWO with screen				
1.27	SWO No. 3 *located at Ballinacurra*	SWO with screen				
1.27	SWO No. 4 *located at Dwyers Rd*	SWO with screen				

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)					
	SWO 1 located at Bailick 1	Describe	Q3			
	SWO 2 located at Bailick 2		Q3			
	SWO 3 located at Ballinacurra		Q3			
	SWO 4 located at Dwyers Rd		Q3			
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)					
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.					
1.28.4	With reference to the SWO's detailed above define are the receiving waters Protected Areas (designated or awaiting designation) .					
1.28.5	With reference to the SWO's detailed above define do the receiving waters have any other designations.					
	Section 1.5 Waste Water Works - Pumping Stations					
1.29	Number of Pumping Stations (operated by the Local Authority)	Nr	16			
1.30	Total Length of Rising Mains (operated by the Local Authority)	km	2			
1.31	Rising Main Material					
1.31.1	What portion of the rising mains consists of ductile iron pipes	% Measured	100.00			
1.31.2	What portion of the rising mains consists of plastic pipes	% Measured	N/A			
1.31.3	What portion of the rising mains consists of other materials	% Estimated	N/A			
1.32	Discharge Capacity of the Pump Set (s) at normal duty point					
		l/sec				
	PS No 1		80			
	PS No. 2		30			
	PS No. 3		10			
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%)	%	100.00%			
1.34	Available Storage Capacity at Pump Stations					
	At Pump Station 1	m^3	1800			
	At Pump Station 2		500			
	At Pump Station 3		50			
1.35	Total Number of ***"Licenced Secondary Discharge Points and Stormwater Overflows"*** at pumping stations	Nr	3			
1.36	Total Number of ***"Emergency Overflow Points"*** at pumping stations	Nr	3			
1.37	What Screening or other mechanical devices are employed at the secondary discharge points or emergency overflows ?					
		Describe	5mm Screen			
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)					
		Describe				
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)					
		Describe				
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.					
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) .					
		Designation				
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.					
		Designation				

1.39	Estimated Number of Private Pumping Stations within the agglomeration (not operated by the Local Authority)	Nr	6			
	Section 1.6 Reporting					
	Section 1.6.1 Reported Number of Sewer Related Complaints					
1.40	Number of Reported Complaints	Nr	200			
1.41	Number of Reported Complaints which have been rectified	Nr	200			
	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. Fulltime Caretaker employed at Curator Grade 5 Level (with basis H&S training) to operate & maintain the sewer network and pumping stations.					
1.48.2						
1.48.3						
1.48.4						
	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	10			
1.50	Sewers Rehabilitated	m	0			
1.51	Manholes Rehabilitated	Nr	3			
1.52	Local Repairs	Nr	12			
1.53	Total Length of sewers Upgraded, Replaced or Rehabilitated	m	10			
1.54	Pumping Stations Operated by Local Authority Upgraded or Repaired	Nr	10			
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	*For example : 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 specifed under the Licence as issued by the EPA. Reference which AER contains this information*					
	Section 1.10 Other Updates Since Last Report					
1.58	*For example : 50% of the sewer network is currently being upgraded under the WSIP with an investment of €1.5m in 2010.*					
1.59	*For example : 2% of the sewer network is currently being replaced under the Local Authorities Annual Maintenance Fund*					
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	Has a Hydraulic Performance Assessment been undertaken for the Sewer Network (e.g., Computer Model or other Engineering Design or Design Review) ?	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	Has a Dynamic Computer Model been used to Assess the Hydraulic Performance of the Sewer Network ?	No	10		Computer Model means a Hydroworks/Infoworks Model, Micro-Drainage Model or equivalent.
2.3	Has a Manhole Survey been undertaken in accordance with WRc Documentation "Model Contract Document for Manhole Location Surveys and the Production of Record Maps" ?	Yes	0		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?	less than 5	2		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	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" ?	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 to Query 2.5
2.5	What was this Flow Survey Information Used for ?				
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	Have Performance Criteria been developed to determine the short, medium or long term capacity of the sewer network ?	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	How many flood events resulting from surcharge in the network have occurred in the past 3 years?	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	Are there deficiencies in performance criteria within the sewer network ?	No	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	Have the causes of these deficiencies in the Performance Criteria been identified and rectified ?	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	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	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	Has an Impermeable Area Survey been carried out for the agglomeration or parts of the agglomeration ?	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)		**97**		
2.12	Prepare Assessment of Needs & Sewer Upgrade Implementation Plan	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	What Environmental or Discharge Quality Data is available with regard to the sewer network ?	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	Do trade effluents discharge to the sewer network?	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	Are there Storm Water Overflows within the network ?	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	Are there Secondary Discharges within the network (excluding Emergency Overflows at Pump Stations)?	No	0		If the answer is **No**, proceed to Query 3.1.4.
3.1.4	Is there any evidence that exfiltration is occurring from the network ?	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	If Answer to Query 3.1.1 is "Yes", what % of trade effluents have a licence to Discharge to the Public Sewer ?	41 - 50%	17		Select N/A if answer to Query 3.1.1 is **No**. If not all trade effleunts are licenced, Local Authority should consider issuing and controlling such discharges under the appropriate Legislation.
3.2.1	Are all licenced trade Discharges compliant with their relevant licence and associated conditions	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	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)	25 - 50%	20		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	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?	100%	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	Have samples from any Secondary Discharges within the system been analysed ?	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	What percentage of discharges from the system are known to cause environmental pollution of the receiving waters ?	None	0		If the answer is greater than 50% then detail, in the AER, the Improvement Programme necessary to reduce this percentage.
3.6	In relation to possible exfiltration has a risk analysis of ground water contamination or pollution been undertaken ?	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	If Answer to Query 3.6 is "Yes", have any groundwater aquifers been identified in the area of the Network and/or Discharge Points?	N/A	0		Select **N/A** if no risk analysis of groundwater contamination has been undertaken.
3.6.2	If Answer to Query 3.6.1 is "Yes", state the classification of groundwater aquifer identified in the area?	N/A	0		Select **N/A** if no risk analysis of groundwater contamination has been undertaken.
3.6.3	In relation to Query 3.6.1, is the aquifer used as a source for Public, Private or Group Water Supply Schemes?	Yes	0		Select **N/A** if no risk analysis of groundwater contamination has been undertaken.
3.7	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?	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	What percentage of storm water overflows comply with the performance criteria referred to in Query 3.7?	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	Have the causes of these Capacity Deficiencies (storm water overflows & Secondary Discharges) been identified ?	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 **No**, consider further examination of the environmental model
	Total Risk Assessment Score (RAS)		177		
3.10	Prepare Assessment of Needs & Sewer Upgrade Implementation Plan	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	Has a CCTV Survey been undertaken in accordance with WRc Documentation "Model Contract Document for Sewer Condition Inspections" and "Manual of Sewer Condition Classification" ?	Yes	0		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?	less than 5	0		If no CCTV has been undertaken, select "N/A" response
4.2	What was this CCTV Survey Information Used for?	Determine full extent of Sewer Rehab Works to be undertaken within Network	0		Select N/A if answer to Query 4.1 is NO.
4.3	Has the CCTV Survey been used to Assess the Structural Condition of the Sewer Network or targeted sections of the Sewer Network?	Yes	0		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	Have Performance Criteria been developed to determine the short, medium or long term structural condition of the sewer network ?	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 calcuating 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 calcuating 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 calcuating 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 calcuating 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 automitically set at the maximum of 140.
4.5	What % of the deficiencies, as detailed in Items 4.4.1, 4.4.2 and 4.4.3, have been rectified ?	>75%	0		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	Have the causes of the Structural Deficiencies (Grades 3, 4 and 5) been identified or is there a Preventative Maintenance Programme in place?	No	10		If the answer is **No**, consider further examination of the sewer network, the structural loading conditions, gradients and possible H_2S Formation. If Yes completed Query 4.7
	Total Risk Assessment Score (RAS)		**90**		

4.7	Prepare Assessment of Needs & Sewer Rehabilitation Implementation Plan	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	Are complaints of an environmental nature recorded and held in a central database?	Yes	0		Consider setting up Central Database for Complaints
5.2	Is there an emergency response procedure in place?	No	20		Consider setting up target response times for dealing with Complaints
5.3	What has been the highest frequency of flooding in the network due to hydraulic inadequacy, over the past 5 years?	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	What has been the highest frequency of flooding in the network due to operational causes over the past 5 years?	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	What has been the highest frequency of surcharging of critical sewers in the network, over the past 5 years?	Twice/yr	4		Select the highest number of events in any 12 month period.
5.6	What has been the highest frequency of reportable incidents in the network, over the past 5 years?	More than 5 times/yr	20		Select the highest number of events in any 12 month period.
5.7	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?	More than 5 times/yr	20		Select the highest number of events at any given Pumping Station in any 12 month period.
5.8	What has been the highest frequency of blockages in sewers in the network over the past 5 years?	>0.25/km/yr	20		Select the highest number of events per km of sewer network in any 12 month period.
5.9	What has been the highest frequency of collapses in sewers in the network over the past 5 years?	Once/yr	4		Select the highest number of events in any 12 month period.
5.10	What has been the highest frequency of bursts in rising mains in the network over the past 5 years?	None	0		Select the highest number of events in any 12 month period.
	Total Risk Assessment Score (RAS)		96		
5.11	Prepare Up Dated Operational and Maintenance Plan				

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	97	Medium Risk	65%	150
Section 3.1 Environmental Risk Assessment	177	Low Risk	35%	500
Section 4.1 Structural Risk Assessment	90	Medium Risk	60%	150
Section 5.1 O&M Risk Assessment	96	Medium Risk	48%	200
Total RAS for Network	460	Low Risk	46%	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"