Annual Environmental Report 2016

Agglomeration Name:	**Ballinode**
Licence Register No.	**D0435-01**

Contents

Section 1. Executive Summary and Introduction to the 2016 AER

1.1 Summary Report on 2016

This Annual Environmental Report has been prepared for **D0435-01, Ballinode,** in County **Monaghan**, in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified assessments are included as an appendix to the AER as follows:

- Sewer Integrity Risk Assessment in **Appendix 7.3**

The agglomeration is served by a wastewater treatment plant with a Plant Capacity PE of 1000. The treatment process includes the following:-

- Preliminary Treatment (Screeening)
- Primary Treatment (Primary Settlement)
- Secondary Treatment (RBC and percolating filter)
- Nutrient Removal (Chemical Dosing for Phosphorus Removal)

The final effluent from the Primary Discharge Point was compliant with the Emission Limit Values in 2016.

378,000kgs sludge as liquid sludge was removed from the wastewater treatment plant in 2016. Sludge was transferred to Monaghan WWTP.

There were no major capital or operational changes undertaken in 2016.

An Annual Statement of Measures is included in **Appendix 7.1**

Section 2. Monitoring Reports Summary

2.1 Summary report on monthly influent monitoring

Table 2.1 Influent Monitoring Summary

2.1.1 Monthly Influent Monitoring	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	6	6	6	6	6		
Annual Max.	532	1265	598	8.5	83	576	1,330
Annual Mean	280.48	661.65	229.63	6.14	39.06	126.45	666.91

Other inputs in the form of sludge/leachate are added to the WWTP after the influent monitoring point and are therefore not represented by influent monitoring. Other inputs, where relevant, are detailed in Section 3.6.

Significance of results

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity as detailed further in Section 3.2

The annual maximum hydraulic loading is less than the peak Treatment Plant Capacity as detailed further in Section 3.2. The design of the wastewater treatment plant allows for peak values and therefore the peak loads have not impacted on compliant with Emission Limit Values

The annual mean organic loading is less than the Treatment Plant Capacity as detailed further in Section 3.2.

The annual maximum organic loading is greater than the Treatment Plant Capacity as detailed further in Section 3.2.

2.2 Discharges from the agglomeration

Table 2.2 - Effluent Monitoring

2.2.1 Effluent Monitoring Summary	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	Ortho P (mg/l)	Ammonia NH3 (mg/l)	pH
WWDL ELV (Schedule A) where applicable	20.00	125.00	35.00	2.00	3.00	6 to 9
ELV with Condition 2 Interpretation included	40.00	250.00	87.50	2.40	3.60	No allowable exceedances
Interim % Reduction (Schedule A)						
Number of sample results	6	6	6	6	6	6
Number of sample results above WWDL ELV	0	0	0	0	0	0
Number of sample results above ELV with Condition 2 Interpretation	0	0	0	0	0	0
Annual Mean (for parameters where a mean ELV applies)						
Overall Compliance (Pass/Fail)	Pass	Pass	Pass	Pass	Pass	Pass

Significance of results

The WWTP was compliant with the ELV's set in the wastewater discharge licence.

2.3.1. Ambient Monitoring Summary

Table 2.3. Ambient Monitoring Report Summary Table

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Bathing Water	Drinking Water	FWPM	Shellfish	Current WFD Status
Upstream Monitoring Point	262979E 335758N	RS03B01200					Good
Downstream Monitoring Point	263809E 335772N	RS03B01280	No	No	No	No	Good

The results for the upstream and downstream monitoring and/or additional monitoring data sets from Irish Water are included in the Appendix 7.2.

Significance of results

- The WWTP was compliant with the ELV's set in the wastewater discharge licence as detailed in Section 2.2.
- The discharge from the wastewater treatment plant does have an observable negative impact on the water quality.
- The discharge from the WWTP doesn't have an observable negative impact on the Water Framework Directive status.

2.4 Data collection and reporting requirements under the UWWTD

The electronic submission of data was completed on 11/01/2017

2.5 Pollutant Release and Transfer Register (PRTR) - report for previous year

A PRTR is not required as the PE is < 2000

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)
Influent mass loading (kg/year)	14,605	34,454	11,958	320	2,034
Effluent mass emission (kg/year)	131	924	278	7	500
% Efficiency (% reduction of influent load)	99%	97%	98%	98%	75%

3.2 Treatment Capacity Report

Table 3.2 - Treatment Capacity Report Summary

Hydraulic Capacity – Design / As Constructed (dry weather flow) (m3/day)	226
Hydraulic Capacity – Design / As Constructed (peak flow) (m3/day)	681
Hydraulic Capacity – Current loading (m3/day)	126
Hydraulic Capacity – Remaining (m3/day)	555
Organic Capacity - Design / As Constructed (PE)	1,000
Organic Capacity - Current loading (PE)	667
Organic Capacity – Remaining (PE)	333
Will the capacity be exceeded in the next three years? (Yes / No)	No
Is an upgrade or expansion of the WWTP proposed? (i.e. if on Minor Programme or CIP) (Yes/No)	No

3.3 Extent of Agglomeration Summary Report

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

Table 3.3 - Extent of Agglomeration Summary Report

	% of P.E. load generated in the agglomeration	Estimated / Measured
Load generated in the agglomeration that is collected in the sewer network	100%	
Load collected in the agglomerations that enters treatment plant	100%	
Load collected in the sewer network but discharges without treatment (includes SWO, EO, and any discharges that are not treated)	Unknown	

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

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

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

3.4 Complaints Summary

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

Table 3.4 - Complaints Summary Table

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
3	Below ground flooding	0	3

3.5 Reported Incidents Summary

A summary of reported incidents is included below.

Table 3.5.1 - Summary of Incidents

3.5.1 Incident Type (e.g. Non-compliance, Emission, spillage, pollution incident)	Incident Description	Cause	No. of Incidents	Recurring Incident (Yes/No)	Corrective Action	Authorities Contacted. Note 1	Reported to EPA (Yes/No)	Closed (Yes/No)
None								

Note 1: For shellfish waters notify the Marine Institute (MI) Sea Fisheries Protection Authority (SFPA) Food Safety Authority (FSAI) and An Bord Iascaigh Mhara (BIM). This should also include any other authorities that should be contacted arising from the findings of any Licence Specific Reports also e.g. Drinking Water Abstraction Impact Risk Assessment, Fresh Water Pearl Mussel Impact Assessments etc.

Table 3.5.2 - Summary of Overall Incidents

Number of Incidents in 2016	0
Number of Incidents reported to the EPA via EDEN in 2016	0
Explanation of any discrepancies between the two numbers above	N/A

3.6 Sludge / Other inputs to the WWTP

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

Table 3.6 - Other Inputs

Input Type	m3/year	P.E.	% of load to WWTP	Included in Influent Monitoring? (Y/N)	Is there a leachate/sludge acceptance procedure for the WWTP? (Y/N)	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Domestic /Septic Tank Sludge	0	0	N/A			
Industrial / Commercial Sludge	0	0	N/A			
Landfill Leachate (delivered by tanker)	0	0	N/A			
Landfill Leachate (delivered by sewer network)	0	0	N/A			
Other (specify)	0	0	N/A			

Section 4. Infrastructure Assessments and Programme of Improvements

4.1 Storm water overflow identification and inspection report

The Stormwater Overflow Assessment was submitted previously in AER 2014. A summary of the significance and operation is included below.

Table 4.1.1 - SWO Identification and Inspection Summary Report

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow (High/Med/ Low)	Compliance with DoEHLG criteria	No. of times activated in 2016 (No. of events)	Total volume discharged in 2016 (m3)	Total volume discharged in 2016 (P.E.)	Estimated / Measured data
SWO	263000E 335849N	Yes	Low	Compliant	Unknown	Unknown	Unknown	Estimated

Table 4.1.2 - SWO Identification and Inspection Summary Report

How much sewage was discharged via SWOs in the agglomeration in the year (m3/yr)?	Unknown
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	Unknown
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2016?	Unknown
Is each SWO identified as non-compliant with DoEHLG Guidance included in the Programme of Improvements?	Yes
The SWO assessment includes the requirements of relevant WWDL Schedules (Yes/No)	Yes
Have the EPA been advised of any additional SWOs / changes to Schedules A/C under Condition 1 ?	N/A

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

The Improvement Programme report included in Appendix 7.1 addresses the **Specified Improvement Programmes** as detailed in Schedules A3 and C of the WWDL. It should detail other improvements identified through assessments required under the licence.

Table 4.2.1 - Specified Improvement Programme Summary

Specified Improvement Programmes	Licence Schedule	Licence Completion Date	Date Expired	Status of Works	% Construction Work Completed	Licensee Timeframe for Completing the Work	Comments
None	N/A	N/A	N/A		N/A	N/A	N/A

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

Table 4.2.2 - Improvement Programme Summary

Improvement Identifier / Name	Improvement Description	Improvement Source	Progress (% complete)	Expected Completion Date	Comments
High inflows into the Ballinode WWTP during storm conditions / periods of heavy rainfall	CCTV survey of network and remedial measures identified carried out	WWTP assessment (Condition 5.3)	0%	Unknown	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis
Operation of STW without adequate flood alleviation measures along the river	Flow control measure along river bank.	2012 ELRA	0%	Unknown	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis

bank. (From 2012 ELRA)					
No record or measurement of SWO activating or flows	Install SWO measurement recorder device to measure flows /record no times it activates	SWO assessment	0%	Unknown	Ballinode is on the 2nd Phase of MN Flow and sampling programme

Table 4.2.3 - Sewer Integrity Risk Assessment Tool Summary

The Improvement Programme should include an assessment of the integrity of the existing wastewater works for the following:	Risk Assessment Rating (High, Medium, Low)	Risk Assessment Score	Reference to relevant section of AER (e.g. Appendix 2 Section 4.	Specified improvements	Comment
Hydraulic Risk Assessment Score	Medium	100	Appendix 7.3 AER 2016		
Environmental Risk Assessment Score	Low	105	Appendix 7.3 AER 2016		
Structural Risk Assessment Score	High	140	Appendix 7.3 AER 2016		
Operation & Maintenance Risk Assessment Score	Low	40	Appendix 7.3 AER 2016		
Overall Risk Score for the agglomeration	Low	385	Appendix 7.3 AER 2016		

Section 5. Licence Specific Reports

Licence Specific Reports Summary Table

Licence Specific Report	Never required by condition 5 in Licence	Required in this AER or outstanding from previous AER	Included in this AER / Remains outstanding	Reference to previous AER containing report or relevant section of this AER
Priority Substances Assessment	Required	No	No	AER 2014
Drinking Water Abstraction Point Risk Assessment	Not Required	No	No	
Shellfish Impact Assessment	Not Required	No	No	
Pearl Mussel Report	Not Required	No	No	
Toxicity/Leachate Management	Not Required	No	No	
Toxicity of Final Effluent Report	Not Required	No	No	
Small Stream Risk Score Assessment	Not Required	No	No	
Habitats Impact Assessment	Not Required	No	No	

Licence Specific Reports Summary of Findings

Licence Specific Report	Recommendations in Report	Summary of Recommendations in Report
Priority Substances Assessment	Yes	No further screening required
Drinking Water Abstraction Point Risk Assessment	No	
Shellfish Impact Assessment	No	
Pearl Mussel Report	No	
Toxicity/Leachate Management	No	
Toxicity of Final Effluent Report	No	
Small Stream Risk Score Assessment		
Habitats Impact Assessment	No	

5.1 Priority Substances Assessment

The Priority Substances Assessment was submitted previously in AER 2014 and is summarised below:

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

Section 6. Certification and Sign Off

Table 6.1 - Summary of AER Contents

Does the AER include an executive summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Is there a need to advise the EPA for consideration of a technical amendment / review of the licence?	N/A
List reason e.g. additional SWO identified	
Is there a need to request/advise the EPA of any modifications to the existing WWDL? Refer to Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	No
List reason e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements	N/A
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	No, none outstanding
Ensure the following reports are included	

Declaration by Irish Water

The AER contains the following:

- Introduction and background to 2016 AER.
- Monitoring Reports Summary.
- Operational Reports Summary.
- Infrastructural Assessment and Programme of Improvements.
- Licence specific reports
- Certification and Sign Off
- Appendices

I certify that the information given in this Annual Environmental Report is truthful, accurate and complete:

Signed:..... Date:..13/02/2017.....

Elizabeth Arnett
Head of Corporate Affairs and Environmental Regulation

Section 7. Appendices

Appendix 7.1 Statement of Measures

1	Issue	High Inflows into the Ballinode WWTP during storm conditions/ periods of heavy rainfall
	Mitigation Measure	CCTV survey of network and remedial measures identified carried out
	Status	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.
2	Issue	Operation of STW without adequate flood alleviation measures along the river bank
	Mitigation Measure	Flood control measure along river bank
	Status	The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.
3	Issue	No record or measurement of SWO activating or flow measurement.
	Mitigation Measure	Install SWO measurement / recorder device to measure flows /record no of times it activates
	Status	Ballinode has been included in the 2nd phase of MN Flow and Sampling Programme. This programme is underway

Improvement Programme

As per condition 5.1 of the licence, a programme of infrastructural improvements to maximise the efficiency and effectiveness of the waste water works shall be prepared and submitted:
In the Ballinode discharge licence, under schedule C, there are no specified improvements. There are no planned improvement works for the Ballinode WWTP.

The treatment capacity is addressed in section 3.2, with adequate remaining capacity at the WWTP.

Under condition 5.2 (a) of the licence, the programme of infrastructural improvements shall include an assessment of the waste water treatment plant having regard to the effectiveness of the treatment provided by reference to the following:

(i) The existing level of treatment, capacity of treatment plant and associated equipment:
As discussed in section 3.2 of this report the existing level of treatment at the plant is considered adequate based on ELV compliance and removal efficiencies. There is adequate capacity at the treatment plant (section 3.2).

(ii) The emission limit values specified in Schedule A: Discharges, of this licence:
The Ballinode WWTP was complaint with WWDL ELV's in 2016.

(iii) The designations of the receiving water body:
The receiving Blackwater River is not a designated Salmonid Water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988) nor is it identified as sensitive water in terms of the Urban Waste

Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. The Blackwater Water River is in the Neagh Bann river basin district with overall status classified as 'Good' but deemed '1a- at risk' with overall objective to protect its status. The 'point risk source' and potential for impact from the Ballinode WWTP discharge on the river is categorised as 'not at risk', and the Blackwater Water Management Unit Action Plan (WMU) does not list the WWTP as impacting on the Blackwater River (Ref. WFD website & reports). Ambient monitoring results were assessed in section 2.3 of this report and it is concluded that there is no significant impact from the discharge of the Ballinode agglomeration on the receiving water quality.

(i) Water quality objective for the receiving water body:
Ballinode WWTP discharges to the River Blackwater main channel. The Q value at 1km downstream is Q4 indicating Good water quality. The water quality objective for the waterbody is classified as good with a maintain 2015 objective in the Neagh Bann International River Basin Management Plan.

(ii) The standards and volumetric limitations applied to any industrial waste water that is licensed to discharge to the waste water works:
There are no industries licensed to discharge to the waste water works.

Under condition 5.2 (b) of the licence, the programme of infrastructural improvements shall include an assessment of the integrity of the waste water works having regard to:

(i) Capacity of the waste water works:

There is adequate capacity at the treatment plant (Section3.2).

(ii) Leaks from the waste water works:
There are no known leaks at the WWTP site.

(iii) Misconnections between foul sewers and surface water drainage network:
There are no known misconnections on the Ballinode network.

(iv) Infiltration by surface water/ground water:
Ballinode network is a combined system, during storm conditions/periods of extensive rainfall, inflows into the Ballinode WWTP increase greatly. It is unknown if there is infiltration by surface/ground water into the network. A CCTV survey of the network would identify any defects in the network and any remedial works is required. This improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis.

b) Programme of Improvements
Under condition 5.2 (c) of the licence, the programme of infrastructural improvements shall include an assessment of all storm water overflows associated with the waste water works to determine the effectiveness of their operation and in particular identify improvements necessary to comply with the requirements of this licence:

An assessment of the SWO from a storm tank at the WWTP in relation to the 'Procedures and criteria in relation to Storm Water Overflows', 1995 document, was carried out in 2014, it is concluded that the SWO complies with the document .

Condition 5.3 (a) and (b) of the licence, the programme of infrastructural improvements shall include a plan for implantation for each individual improvement identified:
There is no specified improvement works under schedule C of the discharge licence. Table 4.2.2 outlines the improvement programme for this agglomeration.

Appendix 7.2 Ambient Monitoring Results

Upstream Ballinode WWTP							
Sample Date	Sample Method	DO mg/l	Temp °C	Ortho Phosphorus mg/l	Ammonia mg/l	pH units	BOD mg/l
10/02/2016	Grab	12.2	5.1	0.024	0.045	7.7	<1
12/04/2016	Grab	10.34	7.6	0.025	0.034	8.1	2
12/07/2016	Grab	8.99	14.1	0.031	0.024	7.9	1.8
07/09/2016	Grab	8.72	16.1	0.05	0.033	7.7	2.4
08/11/2016	Grab	10.71	5.9	0.021	0.026	7.9	1.2
07/12/2016	Grab	11.81	10.1	0.03	0.055	7.9	2.5
	Average	10.46	9.81	0.03	0.036	7.86	1.81

Downstream Ballinode WWTP							
Sample Date	Sample Method	DO mg/l	Temp °C	Ortho Phosphorus mg/l	Ammonia mg/l	pH units	BOD mg/l
10/02/2016	Grab	12	5	0.023	0.034	7.8	<1
12/04/2016	Grab	11.04	7.2	0.02	0.03	8.1	1.8
12/07/2016	Grab	8.92	14.4	0.031	0.024	7.9	1.8
07/09/2016	Grab	8.31	16.4	0.044	0.025	7.7	2.5
08/11/2016	Grab	5.9	10.74	0.016	0.014	8	1.1
07/12/2016	Grab	11.88	10.2	0.028	0.021	8	1.4
	Average	9.68	10.65	0.027	0.025	7.91	1.6

Appendix 7.3 Sewer Integrity Risk Assessment 2016

	Section 1.1 Agglomeration Details					
	Name	**Ballinode**				
	Licence Number	**D0435-01**				
	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)	**Ballinode**				
	Date Licence Issued	**02/05/2012**				
	Current Date	**10/02/2017**				
			Year	Year	Year	Year
	Waste Water Works - Wastewater Treatment Plant Details	**Unit**	2015	2016	2017	2018
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	144000	126455		
1.3	Average Daily Influent BOD or Average BOD Load from area served (If no measured data exists, insert estimated figure)	mg/l, measured	109.9	280.47		
1.4	Total BOD Load	kg/day	15.8256	35.46683385	0	0
1.5	Average Population Equivalent (@0.06kg/person/day)	p.e.	264	591	0	0
1.6	Estimated (existing) Non-Domestic Load	p.e.				
1.7	Estimated Domestic Load	p.e.	264	591	0	0
1.8	Occupancy Rate for the Agglomeration	pop/house	2.7	2.7		
1.9	Estimated Number of Connected Properties	houses	98	219	0	0
1.10	Number of properties within the agglomeration when compared with CSO Data or An Post Geodirectory	houses	187	187		
	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	2.04	1.157986111		
1.12	Estimated 3DWF	l/sec	6.12	3.47	0.00	0.00
1.13	Annual Average Peak Flow to WWTP or discharging from whole system if there is no existing WWTP	l/s, measured	9.479166667	7.71		
1.14	This Annual Average Peak as Multiples of Dry Weather Flow (Peaking Factor)	Nr	4.65	6.66	0.00	0.00
1.15	Highest Peak Flow Recorded (Insert UNKNOWN if no records exist)	l/s	Unknown	9.48		
1.16	Does this Peak Flow (multiple of DWF) cause hydraulic capacity problems within the network ?	---	No	No	Yes	Yes
1.17	Total Rainfall for Previous Year	mm	1269	891		
1.18	Comparison - Mean Annual Rainfall for the agglomeration	mm	1006.9	1006.9		
1.18.1	Define the Weather Station Used		Ballyhaise	Ballyhaise		
1.19	If Storm Water Storage is available at the Wastewater Treatment plant, what is the volume of the storm tank ?	m^3	Unknown	Unknown		
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	Unknown	Unknown		
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	N/A	1 to 2 times per month	< 1 per month
	Waste Water Works - Sewer Network Details	**Unit**	2015	2016	2017	2018
	Section 1.4 Waste Water Works - Gravity Sewer Details					
1.23	What database is used to maintain records of the sewer network		Other Record	Other Record	SUS 2002	SUS 2003
1.23.1	If other or combination of the above please describe	Describe				
1.24	Total length of sewers (use drop down menus to define whether these figures are estimated or measured)	km Estimated	0.49	0.49	0.00	0.00
1.24.1	Total length of sewers > 450mm Diameter	km Estimated				
1.24.2	Total length of sewers > 300mm but ≤ 450mm in Diameter	km Estimated				
1.24.3	Total length of sewers > 225mm but ≤ 300mm in Diameter	km Measured				
1.24.4	Total length of sewers ≤ 225mm in Diameter	km Estimated	0.49	0.49		
1.24.5	Other	km Estimated	1.77	1.77		
1.25	Pipeline Material					
1.25.1	What portion of the sewer network consists of Concrete Pipes	% Estimated				
1.25.2	What portion of the sewer network consists of Plastic Pipes	% Estimated	0%	0%		
1.25.3	What portion of the sewer network consists of Clay materials	% Estimated	0%	0%		
1.25.4	What portion of the sewer network consists of Brick Type Sewers	% Estimated	0%	0%		
1.25.5	What portion of the sewer network consists of Other Materials	% Estimated	100%	100%		
1.26	Total number of Storm Water Overflows	Nr	1	1		

1.27	What Screening or other mechanical devices are employed at the storm water overflows					
	SWO located at 263000E 335849N	Describe	Unknown	Unknown		
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 located at 263000E 335849N	Describe	Q4	Q4		
1.28.2	Where the receiving water is a coastal water indicate the Status of the Receiving Water for each SWO below (Particularly if there is more than one receiving water within the agglomeration)					
	SWO located at 263000E 335849N	Describe	N/A	N/A		
1.28.3	With reference to the SWO's detailed above define if the receiving waters are sensitive in accordance with the Urban Wastewater Treatment Regulations as amended.					
	SWO located at 263000E 335849N	Describe	Not Listed	Not Listed		
1.28.4	With reference to the SWO's detailed above define are the receiving waters Protected Areas (designated or awaiting designation)					
	SWO located at 263000E 335849N	Designation	Not Listed	Not Listed		
1.28.5	With reference to the SWO's detailed above define do the receiving waters have any other designations.					
	SWO located at 263000E 335849N	Designation	Not Listed	Not Listed		
	Section 1.5 Waste Water Works - Pumping Stations					
1.29	Number of Pumping Stations (operated by the Local Authority)	Nr	1	1		
1.30	Total Length of Rising Mains (operated by the Local Authority)	km	Unknown	Unknown		
1.31	Rising Main Material					
1.31.1	What portion of the rising mains consists of ductile iron pipes	% Measured	Unknown	Unknown		
1.31.2	What portion of the rising mains consists of plastic pipes	% Measured	Unknown	Unknown		
1.31.3	What portion of the rising mains consists of other materials	% Estimated	Unknown	Unknown		
1.32	Discharge Capacity of the Pump Set (s) at normal duty point					
	Cappog Bridge at 263775E, 335755N		7.8	7.8		
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	100		
1.34	Available Storage Capacity at Pump Stations (include pump sump and any storm water/emergency overflow tanks)					
	Storm storage	m^3	16	16		
1.35	Total Number of ***"Licenced Secondary Discharge Points and Stormwater Overflows"*** at pumping stations	Nr	1	1		
1.36	Total Number of ***"Emergency Overflow Points"*** at pumping stations	Nr	1	1		
1.37	What Screening or other mechanical devices are employed at the secondary discharge points or emergency overflows ?					

	None	Describe	None	None		
1.38	Water Quality at the receiving waters at each pumping station location					
1.38.1	Where the receiving water is a river - indicate the EPA Biological Rating of the Receiving Water for each secondary discharge point or emergency overflow at each pumping station (Particularly if there is more than one receiving water within the agglomeration)					
	Cappog Bridge at 263775E, 335755N	Describe	Q4	Q4		
1.38.2	Where the receiving water is a coastal water indicate the Status of the Receiving Water for each secondary discharge point or emergency overflow at each pumping station (Particularly if there is more than one receiving water within the agglomeration)					
	Cappog Bridge at 263775E, 335755N	Describe	N/A	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.					
	Cappog Bridge at 263775E, 335755N		Not Listed	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) .					
	Cappog Bridge at 263775E, 335755N	Designation	Not listed	Not listed		
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.					
	Cappog Bridge at 263775E, 335755N	Designation	Not listed	Not listed		
1.39	Estimated Number of Private Pumping Stations within the agglomeration (not operated by the Local Authority)	Nr	Unknown	Unknown		
	Section 1.6 Reporting					
	Section 1.6.1 Reported Number of Sewer Related Complaints ('Complaint' as defined in the Discharge Licence)					
1.40	Number of Reported Complaints	Nr	0	0		
1.41	Number of Reported Complaints which have been rectified	Nr	0	0		
	Section 1.6.2 Reported/Recorded/Estimated Number of Secondary Discharges					
1.42	Number of Reported Secondary Discharges	Nr	Unknown	Unknown		
1.43	Number of Recorded Secondary Discharges	Nr	Unknown	Unknown		
1.44	Estimated Total Number of Secondary Discharges	Nr	0	0	0	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	Unknown	Unknown		
1.46	Number of Recorded Emergency Overflow Discharges	Nr	Unknown	Unknown		
1.47	Estimated Total Number of Emergency Overflow Discharges	Nr	0	0	0	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 *(The individual personnel shall not be named, only grade and level of training needs to be provided)*					

1.48.1	Caretaker 1 is responsible for the maintenance and operation of the Ballinode network and WWTP. The caretaker is also responsible for the Scotstown, Knockatallon and Tydavnet conglomerations.					
1.48.2	Caretaker operates under the supervision of a Line Manager Technician					
1.48.3	The Line Manager Technician is supervised by the Senior Executive Engineer					
1.48.4						
	Waste Water Works - Investment Details	**Unit**	2015	2016	2017	2018
	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	0		
1.50	Sewers Rehabilitated	m	0	0		
1.51	Manholes Rehabilitated	Nr	0	0		
1.52	Local Repairs	Nr	0	0		
1.53	Total Length of sewers Upgraded, Replaced or Rehabilitated	m	0	0	0	0
1.54	Pumping Stations Operated by Local Authority Upgraded or Repaired	Nr	0	0		
1.55	WWTW operated by Local Authority Upgraded or Replaced	Nr	0	0		
1.56	In the following two cells describe the actual Capital Investment undertaken in the reporting period.					
1.56.1	*There were no major capital or operational changes undertaken in 2015. An Annual Statement of Measures is included in 2015 AER Report - Appendix 7.1*					
1.56.2						
	Section 1.9 Licence Specified Improvements Works					
1.57	*2015 AER, Appendix 7.3*					
	Section 1.10 Other Updates Since Last Report					
1.58						
1.59						

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" ?**	No	10	he network, improven	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	**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?**	None	0		Flood events in this context means water/sewage backing up from the Network causing flooding of properties or causing disruption of traffic
2.8	**Are there deficiencies in performance criteria within the sewer network ?**	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	**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)		**100**		
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?	No	0		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 ?	N/A	0		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	N/A	0		Answer N/A if none of the trade effluents are licenced. Answer No if this information is unknown. If the answer is **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)	N/A	0		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?	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	Have samples from any Secondary Discharges within the system been analysed ?	No	30		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 ?	N/A	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 ?	N/A	0		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 If the answer is **Yes**, proceed to Query 3.6
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?	N/A	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	Install SWO measurement/recorder device to measure flows/record no. times it activates	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?	> 80%	0		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 ?	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 model or assimilative model
		Total Risk Assessment Score (RAS)	**105**		
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" ?**	No	10	CCTV survey of network to be carried out	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	**What was this CCTV Survey Information Used for?**	N/A	10		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?**	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	**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 ?**	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	**Have the causes of the Structural Deficiencies (Grades 3, 4 and 5) been identified or is there a Preventative Maintenance Programme in place?**	N/A	0		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)	**140**		

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?	None	0		Refers to flooding from the Network only, not natural flooding from rivers/streams/high tides. Select the highest number of events in any 12 month period.
5.5	What has been the highest frequency of surcharging of critical sewers in the network, over the past 5 years?	None	0		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?	None	0		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?	None	0		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?	unknown	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?	None	0		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)		**40**		
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	100	Medium Risk	67%	150
Section 3.1 Environmental Risk Assessment	105	Low Risk	21%	500
Section 4.1 Structural Risk Assessment	140	High Risk	93%	150
Section 5.1 O&M Risk Assessment	40	Low Risk	20%	200
Total RAS for Network	385	Low Risk	39%	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"