Annual Environmental Report

2019

Tramore

D0015-01

CONTENTS

7.1 AMBIENT MONITORING SUMMARY

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2019 AER

This Annual Environmental Report has been prepared for D0015-01, Tramore, in Waterford in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified reports where relevant are included as an appendix to the AER.

1.1 ANNUAL STATEMENT OF MEASURES

A summary of any improvements undertaken is provided where applicable.

A Drainage Area Plan for Tramore is due to commence in Q4 2020.

1.2 TREATMENT SUMMARY

The agglomeration is served by a wastewater treatment plant(s)

- TRAMORE WWTP with a Plant Capacity PE of 20000, the treatment type is 2 - Secondary treatment

1.3 ELV OVERVIEW

The overall compliance of the final effluent with the Emission Limit Values (ELVs) is shown below. More detailed information on the below ELV's can be found in Section 2.

Discharge Point Reference	Treatment Plant	Discharge Type	Compliance Status	Parameters failing if relevant
TPEFF3100D0015SW001	TRAMORE WWTP	Treated	Non-Compliant	Ammonia-Total (as N) mg/l

1.4 LICENCE SPECIFIC REPORTING INCLUDED IN AER

Assessment / Report	Included in AER
There are no Licence Specific Reports included in the AER.	

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 TRAMORE WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - TRAMORE WWTP

A summary of influent monitoring for the treatment plant is presented below. This monitoring is primarily undertaken in order to determine the overall efficiency of the plant in removing pollutants from the raw wastewater.

Parameters	Number of Samples	Annual Max	Annual Mean
Total Nitrogen mg/l	12	38.8	11.1
COD-Cr mg/l	12	725	180.77
Total Phosphorus (as P) mg/l	12	6.64	1.79
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	331	83.94
Suspended Solids mg/l	12	330	81.1
Hydraulic Capacity	N/A	32153	6100

If other inputs in the form of sludge / leachate are added to the WWTP then these are included in Section 2.1.5 if applicable.

Significance of Results:

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity. The annual maximum hydraulic loading is greater than the peak Treatment Plant Capacity. Further details on the plant capacity and efficiency can be found under the sectional ‘Operational Performance Summary’. The design of the wastewater tretament plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF3100D0015SW001

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	250	N/A	12	N/A	N/A	14.41	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	3.23	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	12	N/A	N/A	2.73	Pass
Total Oxidised Nitrogen (as N) mg/l	20	24	N/A	12	N/A	N/A	5.55	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.49	Pass
Ammonia-Total (as N) mg/l	5	10	N/A	12	4	2	4.61	Fail
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	12	N/A	N/A	0.48	
Nitrite (as N) mg/l	N/A	N/A	N/A	11	N/A	N/A	0.34	
Conductivity 20 C µS/cm	N/A	N/A	N/A	12	N/A	N/A	2942.45	

Nitrate (as N) mg/l	N/A	N/A	N/A	11	N/A	N/A	5.41	
Fats, Oils & Greases mg/l	N/A	N/A	N/A	12	N/A	N/A	0.3	
Total Nitrogen mg/l	N/A	N/A	N/A	11	N/A	N/A	9.22	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	0.62	

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied

Cause of Exceedance(s):

WWTP not designed for N removal

Significance of Results:

The WWTP is not compliant with the ELVs set in the WWDL

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF3100D0015SW001

A summary of monitoring from ambient monitoring points associated with the wastewater discharge is provided in the sections below. For discharges to rivers upstream (U/S) and downstream (D/S) location data is provided. For other ambient points in lakes, coastal or transitional waters, monitoring data from the most appropriate monitoring station is selected.

The table below provides details of ambient monitoring locations and details of any designations as sensitive areas.

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
There is no Ambient data monitoring requirements prescribed in the licence. Bathing water monitoring data is included in Appendix 7.1.							

Significance of Results:

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.

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

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - TRAMORE WWTP

2.1.4.1 Treatment Efficiency Report - TRAMORE WWTP

Treatment efficiency is based on the removal of key pollutants from the influent wastewater by the treatment plant. In essence the calculation is based on the balance of load coming into the plant versus the load leaving the plant. The efficiency is presented as a percentage removal rate.

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

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
TP	5539	1551	72
TN	34377	23877	31
COD	559914	36071	94
SS	251194	8095	97
cBOD	259984	6826	97

Note: The above data is based on sample results for the number of dates reported

2.1.4.2 *Treatment Capacity Report Summary - TRAMORE WWTP*

Treatment capacity is an assessment of the hydraulic (flow) and organic (the amount of pollutants) load a treatment plant is designed to treat versus the current loading of that plant.

TRAMORE WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	12000
DWF to the Treatment Plant (m^3/day)	4000
Current Hydraulic Loading - annual max (m^3/day)	32153
Average Hydraulic loading to the Treatment Plant (m^3/day)	6100
Organic Capacity (PE) - As Constructed	20000
Organic Capacity (PE) - Collected Load (peak week)[Note1]	15183
Organic Capacity (PE) - Remaining	4817
Will the capacity be exceeded in the next three years? (Yes/No)	No

Nominal design capacities can be based on conservative design principles. In some cases assessment of existing plants has shown organic capacities significantly higher than the nominal design capacity. Accordingly plants that appear to be overloaded when comparing a collected peak load with the nominal design capacity can be fully compliant due to the safety factors in the original design.

2.1.5 SLUDGE / OTHER INPUTS - TRAMORE WWTP

'Other inputs' to the waste water treatment plant are summarised in table below

Input type	Quantity	Unit	P.E.	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
There is no Sludge and Other Input data for the Treatment Plant included in the AER.							

3 COMPLAINTS AND INCIDENTS

3.1 COMPLAINTS SUMMARY

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

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
10	Blocked Sewer	0	10

3.2 REPORTED INCIDENTS SUMMARY

Environmental incidents that arise in an agglomeration are reported on an on-going basis in accordance with our waste water discharge licences. Where an incident occurs and it is reportable under the licence, it is reported to the Environmental Protection Agency through their Environmental Data Exchange Network, or in some instances by telephone. Some incidents which arise in the agglomeration are recorded by Irish Water but may not be reportable under our licence for example where the incident does not have an impact on environmental performance.

A summary of reported incidents is included below.

3.2.1 SUMMARY OF INCIDENTS

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	Adverse Weather	1	No	Yes
Uncontrolled release	Adverse Weather	1	No	Yes
Spillage	Adverse Weather	1	No	Yes

Uncontrolled release	EO caused by ragging or blocking	1	Yes	No
Breach of ELV	WWTP not designed for N removal	1	Yes	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2019	5
Number of Incidents reported to the EPA via EDEN in 2019	5
Explanation of any discrepancies between the two numbers above	N/A

4 INFRASTRUCTURAL ASSESSMENTS AND PROGRAMME OF IMPROVEMENTS

4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT

A summary of the operation of the storm water overflows and their significance where known is included below:

4.1.1 SWO IDENTIFICATION

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteriaaa	No. of times activated in 2019 (No. of events)	Total volume discharged in 2019 (m3)	Monitoring Status
SW2	259192, 101391	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW3	258782, 101103	Yes	Medium	Not Meeting	Unknown	Unknown	Not Monitored
SW4(a)	258217, 101100	Yes	Medium	Not Meeting	Unknown	Unknown	Not Monitored
SW4(b)	258217, 101100	Yes	Medium	Not Meeting	Unknown	Unknown	Not Monitored
SW5(a)	257627, 100504	Yes	Medium	Not Meeting	Unknown	Unknown	Monitored

SW5(b)	257627, 100504	Yes	Medium	Not Meeting	Unknown	Unknown	Not Monitored
SW5(c)	257627, 100504	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW5(d)	257627, 100504	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	259370, 98984	No	Low	Meeting	Unknown	Unknown	Monitored

SWO Summary	
How much sewage was discharged via SWOs in the agglomeration in the year (m3)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	Yes
The SWO Assessment included the requirements of relevant of WWDL schedules?	N/A
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	No

4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS.

4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides list of the various reports required for this agglomeration and a brief summary of their recommendations.

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
D0015-SIP:04	SW5 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteriaaa outlined in DoEHLG.	C	01/11/2012	Yes	Not Started		SWO Assessment Programme to assess performance against DoECLG criteria
D0015-SIP:01	SW2 - Upgrade the emergency overflow, as required, to minimise overflows	C	31/12/2010	Yes	Not Started		The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
D0015-SIP:02	SW3 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteriaaa outlined in DoEHLG.	C	01/11/2012	Yes	Not Started		SWO Assessment Programme to assess performance against DoECLG criteria
D0015-SIP:03	SW4 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteriaaa outlined in DoEHLG.	C	01/11/2012	Yes	Not Started		SWO Assessment Programme to assess performance against DoECLG criteria

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

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description / or any Operational Improvements	Improvement Source	Expected Completion Date	Comments
D0015-IP:58	A Drainage Area Plan for Tramore is due to commence in Q4 2020	Other	01/12/2020	

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

The utilisation of multiple capital maintenance programmes and the outputs of the workshops with the Local Authority Operations Staff held under the programme can be used to satisfy the requirements of Condition 5 regarding network integrity. Improvement works identified by way of these programmes and workshops will be included in the Improvements Summary Table.

5 LICENCE SPECIFIC REPORTS

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides list of the various reports required for this agglomeration and a brief summary of their recommendations.

5.a Licence Specific Reports Summary Table

Licence Specific Report	Required by licence	Year included in AER	Included in this AER	Reference to relevant section of AER
Priority Substances Assessment	Yes	2015	No	

5.1 PRIORITY SUBSTANCES ASSESSMENT

The Priority Substances Assessment Report has been included in the AER 2015

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
Does the AER include an Executive Summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Is there a need to advise the EPA for consideration of a Technical Amendment / Review of the licence?	No
List reason e.g. additional SWO identified	N/A
Is there a need to request/advise the EPA of any modification to the existing WWDL with respect to condition 4 changes to monitoring location, frequency etc	No
List reason e.g. changes to monitoring requirements	N/A
Have these processes commenced?	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER	Yes

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

Signed: Date: 04/05/2020

This AER has been produced by Irish Water's Environmental Information System (EIMS) and has been electronically signed off in that system for and on behalf of ,

Katherine Walshe

Acting Head of Environmental Regulation.

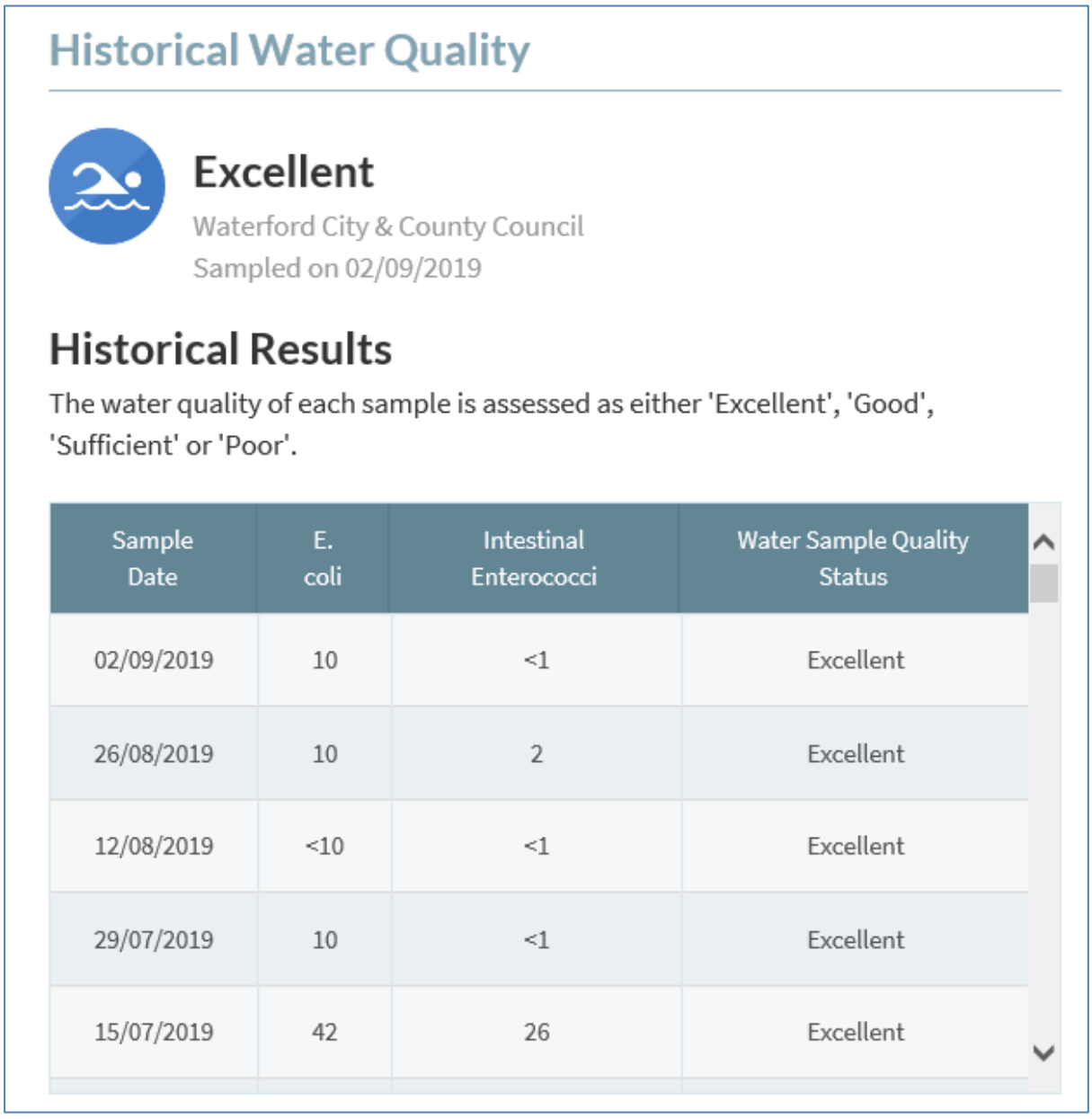
7 APPENDIX

Appendix
Appendix 7.1 - Ambient monitoring summary

Ambient Monitoring Summary

Tramore Bay, into which the Tramore WWTP discharges, is not assigned a Status under the 2010-2012 Water Framework Directive classification. Water quality monitoring of the bay has not taken place for the purpose of classification. The bathing waters at Tramore Beach is classified as achieving Excellent Water Quality [and was designated a Blue Flag beach in 2019].

There is therefore no indication that the discharge from the WWTP is impacting bathing water quality.



Historical Water Quality

Excellent

Waterford City & County Council

Sampled on 02/09/2019

Historical Results

The water quality of each sample is assessed as either 'Excellent', 'Good', 'Sufficient' or 'Poor'.

Sample Date	E. coli	Intestinal Enterococci	Water Sample Quality Status
02/09/2019	10	<1	Excellent
26/08/2019	10	2	Excellent
12/08/2019	<10	<1	Excellent
29/07/2019	10	<1	Excellent
15/07/2019	42	26	Excellent

The latest Water Quality information [including historical] relating to Tramore Strand can be found on this website: https://www.beaches.ie/find-a-beach/#/beach/IESEBWC140_0000_0100

Waterford City & Council also undertakes Bathing Water sampling at Tramore Pier, which is not a designated Bathing Water; however it is a popular local amenity.

This pier is adjacent to the Cover Pump Station and can be adversely affected by the storm overflows from the pump station during rainfall events.

The WWDL has no specified Ambient Monitoring Locations.