Annual Environmental Report

2022

Tramore

D0015-01

CONTENTS

7.1 AMBIENT MONITORING SUMMARY

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2022 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.

There was no major capital or operational changes undertaken

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

Assessment / Report
There are no Licence Specific Reports included in this 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	13	55	17
COD-Cr mg/l	12	5660	552
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	1511	208
pH pH units	12	7.40	7.18
Suspended Solids mg/l	12	4550	367
Total Phosphorus (as P) mg/l	12	28	4.30
Ammonia-Total (as N) mg/l	12	54	16
ortho-Phosphate (as P) - unspecified mg/l	12	12	1.84
Hydraulic Capacity	N/A	17192	5391

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 treatment 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 exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	250	N/A	10	N/A	N/A	17	Pass
Suspended Solids mg/l	35	87.5	N/A	10	N/A	N/A	2.95	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	10	N/A	N/A	3.66	Pass
Total Oxidised Nitrogen (as N) mg/l	20	24	N/A	10	N/A	N/A	5.46	Pass
pH pH units	9	9	N/A	10	N/A	N/A	7.28	Pass
Ammonia-Total (as N) mg/l	5	6	N/A	10	1	1	2.07	Fail
Total Nitrogen mg/l	N/A	N/A	N/A	11	N/A	N/A	7.44	

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 exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
E. Coli no./100mls	N/A	N/A	N/A	1	N/A	N/A	21870	
Fats, Oils & Greases mg/l	N/A	N/A	N/A	10	N/A	N/A	0.386	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	10	N/A	N/A	0.626	
Faecal coliforms no./100mls	N/A	N/A	N/A	1	N/A	N/A	120330	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	10	N/A	N/A	0.484	
Enterococci (Intestinal) MPN/100ml	N/A	N/A	N/A	1	N/A	N/A	20001	
Nitrite (as N) mg/l	N/A	N/A	N/A	10	N/A	N/A	0.763	
Nitrate (as N) mg/l	N/A	N/A	N/A	10	N/A	N/A	4.69	

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied
2 – For pH the WWDA specifies a range of pH 6 - 9

Cause of Exceedance(s):

Refer to Incident Section of Report

Significance of Results:

The WWTP is not in compliance with the ELV,s as set out in the WWDL. The impact on receiving waters is assessed further in Section 2.

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 Ecological Status

The results for ambient results and / or additional monitoring data sets are included in the **Appendix 7.1 - Ambient monitoring summary**

Significance of Results:

The coastal/transitional ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence for the following: Ammonia-Total (as N) mg/l.

The ambient monitoring results do not meet the required EQS at the upstream and the downstream monitoring locations. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

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

The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.

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)
SS	746001	6542	99
COD	1123010	38152	97
TP	8738	1388	84
TN	38366	18677	51
cBOD	423347	8109	98

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)	17192

Tramore WWTP	
Average Hydraulic loading to the Treatment Plant (m^3/day)	5391
Organic Capacity (PE) - As Constructed	20000
Organic Capacity (PE) - Collected Load (peak week)[Note1]	15681
Organic Capacity (PE) - Remaining	4319
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 related to the discharge(s) to water from the WWTP and network is included below.

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
There were no relevant environmental complaints in 2022.			

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 Uisce Éireann 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)
Breach of ELV	WWTP not designed for N removal	1	Yes	No
Spillage		1	No	Yes

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

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2022	4
Number of Incidents reported to the EPA via EDEN in 2022	4
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 (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2022 (No. of events)	Total volume discharged in 2022 (m3)	Monitoring Status
SW002	259192,101391	Yes	Low Significance	Not Meeting Criteria	Unknown	140225	Monitored
SW3	258782,101103	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
SW4(a)	258217,101100	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
SW4(b)	258217,101100	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
SW5(b)	257627,100504	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
SW5(a)	257627,100504	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2022 (No. of events)	Total volume discharged in 2022 (m3)	Monitoring Status
SW5(c)	257627,100504	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
SW5(d)	257627,100504	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
TBC	259030,100913	No	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored

Any TBC SWO(s) were identified as part of the on-going National SWO programme and will be updated in subsequent AER(s) once the information is confirmed.

SWO Summary	
How much sewage was discharged via monitored SWOs in the agglomeration in the year (m3)?	140225
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	No
The SWO Assessment included the requirements of relevant of WWDL schedules?	Yes
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 a 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:01	SW2 - Upgrade the emergency overflow, as required, to minimise overflows	C	31/12/2010	Yes	Works Completed		
D0015-SIP:02	SW3 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteria outlined in DoEHLG.	C	01/11/2012	Yes	At Planning Stage	2034	
D0015-SIP:03	SW4 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteria outlined in DoEHLG.	C	01/11/2012	Yes	At Planning Stage	2034	
D0015-SIP:04	SW5 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply	C	01/11/2012	Yes	At Planning Stage	2034	

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
	with the criteria outlined in DoEHLG.						

A summary of the status of any other improvements identified by under Condition 5 assessments- is included below.

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description / or any Operational Improvements	Improvement Source	Expected Completion Date	Comments
No additional improvements planned at this time.				

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 Tables 4.2.1 and 4.2.2.

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 a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Licence Specific Report	Required by licence	Year included in AER	Included in this AER
Priority Substances Assessment	Yes	2015	No

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?	Yes
List reason e.g. additional SWO identified	Additional SWO identified
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	N/A

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

Signed: Date: 24/04/2023

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

Eleanor Roche

Acting Head of Environmental Regulation.

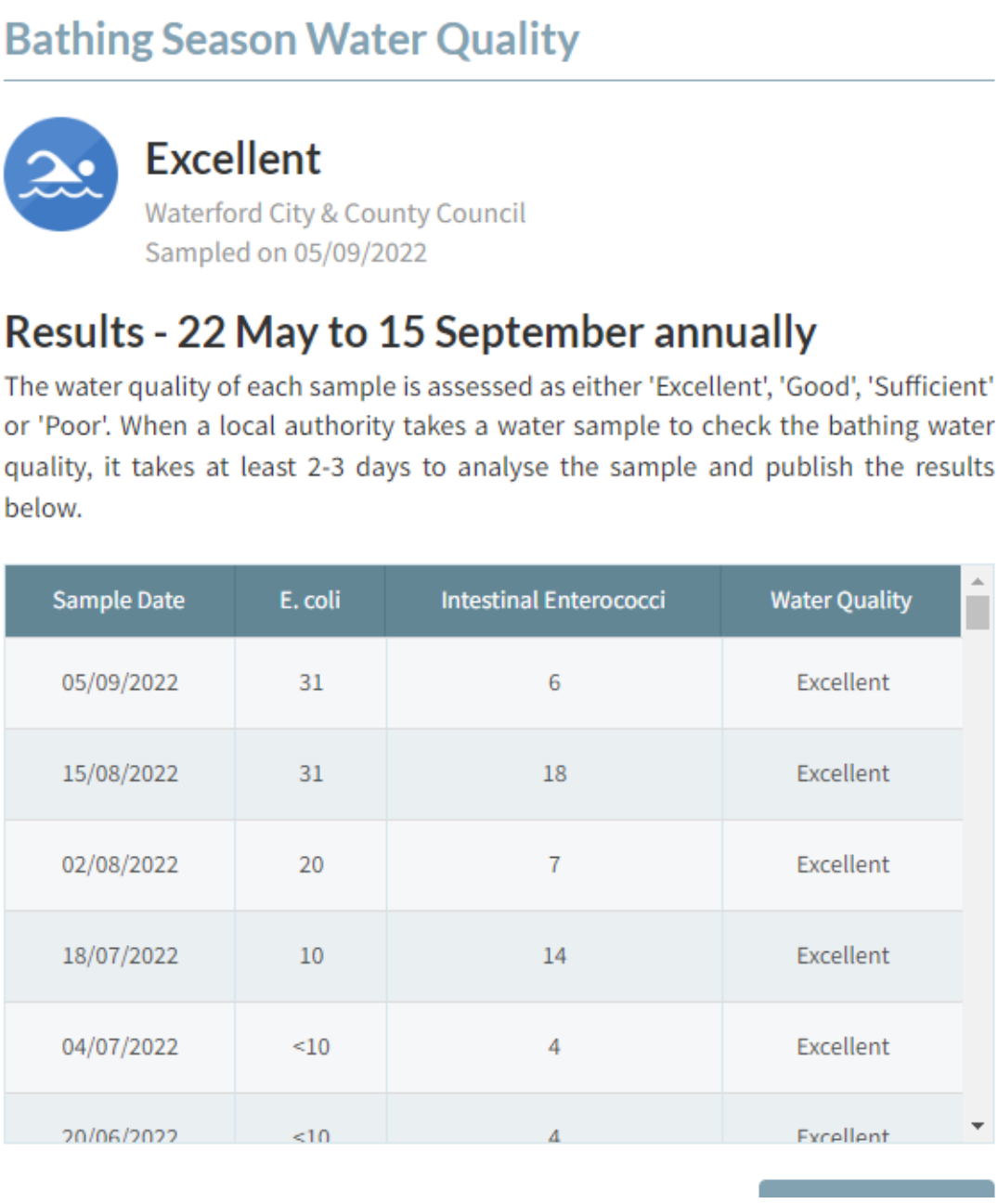
7 APPENDIX

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 2022].

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



Bathing Season Water Quality

Excellent

Waterford City & County Council

Sampled on 05/09/2022

Results - 22 May to 15 September annually

The water quality of each sample is assessed as either 'Excellent', 'Good', 'Sufficient' or 'Poor'. When a local authority takes a water sample to check the bathing water quality, it takes at least 2-3 days to analyse the sample and publish the results below.

Sample Date	E. coli	Intestinal Enterococci	Water Quality
05/09/2022	31	6	Excellent
15/08/2022	31	18	Excellent
02/08/2022	20	7	Excellent
18/07/2022	10	14	Excellent
04/07/2022	<10	4	Excellent
20/06/2022	<10	4	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/IESEBWC110_0000_0100

Tramore Bay - 2022 - Bathing Water Sampling Results

Sample Date	E.coli Result	Intestinal Enterococci Result	Water Quality
05/09/2022	31	6	Excellent
15/08/2022	31	18	Excellent
02/08/2022	20	7	Excellent
18/07/2022	10	14	Excellent
04/07/2022	<10	4	Excellent
20/06/2022	<10	4	Excellent
07/06/2022	<10	<1	Excellent
26/05/2022	10	2	Excellent

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.