Annual Environmental Report

2021

Enniscrone

D0102-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0102-01, Enniscrone, in Sligo 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)

- Enniscrone WWTP with a Plant Capacity PE of 5000, 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
TPEFF2700D0102SW001	Enniscrone WWTP	Treated	Non-Compliant	Ammonia-Total (as N) mg/l Total Oxidised Nitrogen (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 ENNISCRONE WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - ENNISCRONE 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 Phosphorus (as P) mg/l	24	16	3.10
BOD, 5 days with Inhibition (Carbonaceo mg/l	26	1807	243
COD-Cr mg/l	26	9930	754
Total Nitrogen mg/l	23	94	22
Suspended Solids mg/l	25	45228	3099
Hydraulic Capacity	N/A	4540	927

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’.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF2700D0102SW001

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	26	N/A	N/A	19	Pass
Suspended Solids mg/l	35	88	N/A	26	N/A	N/A	5.68	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/l	25	50	N/A	25	N/A	N/A	4.13	Pass
Temperature °C	25	25	N/A	24	N/A	N/A	11	Pass
Total Oxidised Nitrogen (as N) mg/l	15	18	N/A	23	7	5	7.92	Fail
Ammonia-Total (as N) mg/l	10	12	N/A	23	4	3	5.09	Fail
pH pH units	9.00	9.00	N/A	22	N/A	N/A	7.84	Pass
Conductivity @20°C µS/cm	N/A	N/A	N/A	1	N/A	N/A	562	
Fats, Oils & Greases mg/l	N/A	N/A	N/A	3	N/A	N/A	2.46	

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)
Dissolved Oxygen mg/l	N/A	N/A	N/A	1	N/A	N/A	9.60	
Nitrate (as N) mg/l	N/A	N/A	N/A	1	N/A	N/A	16	
Nitrite (as N) mg/l	N/A	N/A	N/A	1	N/A	N/A	0.047	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	2	N/A	N/A	0.900	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	1	N/A	N/A	0.920	

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):

Plant Not Designed for N Removal

Significance of Results:

The WwTP is non compliant with the ELV's set in the Wastewater Discharge License. The impact on receiving waters is assessed further in Section 2.

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF2700D0102SW001

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
There is no Ambient data included in the AER.							

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

The ambient monitoring results meet the required EQS. 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.

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

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - ENNISCRONE WWTP

2.1.4.1 Treatment Efficiency Report - Enniscrone 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)
COD	285577	5333	98
cBOD	92026	1130	99
TP	1173	331	72
TN	8537	N/A	N/A
SS	1190000	1626	100

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

2.1.4.2 Treatment Capacity Report Summary - Enniscrone 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.

Enniscrone WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	3369
DWF to the Treatment Plant (m^3/day)	1123
Current Hydraulic Loading - annual max (m^3/day)	4540
Average Hydraulic loading to the Treatment Plant (m^3/day)	927
Organic Capacity (PE) - As Constructed	5000
Organic Capacity (PE) - Collected Load (peak week)[Note1]	3379
Organic Capacity (PE) - Remaining	1621

Enniscrone WWTP	
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 - ENNISCRONE 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)
Other	687	Volume (m3)		1	No	Yes	No

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 2021.			

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

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	EO caused by ragging or blocking	1	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	4
Number of Incidents reported to the EPA via EDEN in 2021	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 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
SW002	128487, 330961	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW003	128357, 329720	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW004	128447, 331331	Yes	Low	Meeting	Unknown	17339	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 SWOs in the agglomeration in the year (m3)?	17339
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	N/A
The SWO Assessment included the requirements of relevant of WWDL schedules?	Yes

SWO Summary	
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	N/A

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
There are no Specified Improvement Programmes for this Agglomeration.							

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	2012	No
Toxicity of Final Effluent	Yes	2012	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
Has a Technical amendment/licence review application been submitted to the Agency by IW?	N/A
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	N/A
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: 21/04/2022

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

Ambeint Monitoring Report Summary Data

		Designations				
Ambient monitoring point/Coastal Monitoring Code	Irish Grid Reference	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
TPEFF2700D105SW001	128,260mE, 329,920mN	YES	NO	NO	NO	GOOD

Ambient Monitoring Results Summary

Monitoring point	Date	Ammonia N	BOD	Chlorophyll	Dissolved Inorganic Nitrogen	Dissolved Oxygen	E. Coli	Enterococci	Faecal Coliforms	Nitrate	Nitrite	pH	Temperature	Total Oxidised Nitrogen
		mg/l	mg/l	ug/l	mg/l	mg/l	MPN/100 mls	MPN/100mls	MPN/100mls	mg/l	mg/l	pH unit	Deg C	mg/l
CW22005295MY2010	08/01/2021	0.01	3	0.5	0.2	11				2	0.66	8.3	3.4	0.62
CW22005295MY2010	18/02/2021	0.01	1.8	1.6	0.4	10				0.42	0.005	8.2	5.7	0.46
CW22005295MY2010	12/03/2021	0.01	1.6	1.9	0.5	9				0.44	0.005	8.3	5.5	0.42
CW22005295MY2010	09/04/2021	0.012	1	0.8	0.4	10	88	30	89	0.38	0.005	8.3	6.8	0.39
CW22005295MY2010	28/05/2021	0.011	1.7	2.4	0.2	9	687	68	700	0.15	0.005	8.4	9.5	0.15
CW22005295MY2010	09/07/2021	0.01	1	1	0.4	9	1046	63	1200	0.39	0.005	8.2	13.2	0.37
CW22005295MY2010	12/08/2021	0.042	1.8	15.6	0.5	10	5	30	60	0.15	0.006	8.1	15.2	0.15
CW22005295MY2010	16/09/2021	0.457	1.1	4.1	0.2	11.6				1	0.005	8.4	12.4	1
CW22005295MY2010	14/10/2021	0.48	4	5.5	0.5	11.06				1	0.005	8	3.4	1
CW22005295MY2010	17/12/2021	0.488	1	3.2	0.6	8.9				1	0.005	7.7	9	1

Bathing Water Results Summary (if revelant)

Monitoring point	Date	Colour (Apparant)	Dissolved Oxygen	E Coli	Enterococci	pH	Salinity	Temperature
		Hazen	% O2	MPN/100mls	cfu/100mls	pH units	ppt	Deg C
BPNBF270000010102	24/05/2021	75.2	109.7	700	18	8.5	< 1	11.4
BPBLF270000010002	24/05/2021	53.1	98.9	290	19	8.1	25.6	11.5
BPBLF270000010002	01/06/2021	21.3	98.7	< 10	4	8.2	29.8	12.3
BPNBF270000010102	01/06/2021	48.7	108.3	780	140	8.5	< 1	13.4
BPBLF270000010002	14/06/2021	12.1	103.6	10	< 1	8.2	31.8	14.5
BPNBF270000010102	14/06/2021	48	114.4	830	59	8.5	< 1	15.4
BPBLF270000010002	28/06/2021	20.5	101.2	< 10	3	8.4	29.9	15.7
BPNBF270000010102	28/06/2021	43	94.3	430	170	8.3	< 1	17
BPBLF270000010002	12/07/2021	32.5	97.1	100	19	8.3	27.3	17.9
BPNBF270000010102	12/07/2021	161	99.2	2010	69	8.4	< 1	16.6
BPNBF270000010100	26/07/2021	31.3	104.4	150	73	8.3	29.4	19.8
BPBLF270000010002	26/07/2021	29.6	98.6	110	52	8.3	28.5	19.5

BPNBF270000010102	26/07/2021	35.5	99	430	110	8.4	< 1	17.7
BPBLF270000010002	09/08/2021	95.8	100.3	830	280	8.2	22.2	17.3
BPNBF270000010102	09/08/2021	257	98	> 2010	790	8.3	< 1	15.5
BPBLF270000010002	11/08/2021	48.2	104	290	80	8.3	23	16.7
BPNBF270000010102	11/08/2021	195	110	> 2010	510	8.3	< 1	14.6
BPBLF270000010002	23/08/2021	46.1	104	310	40	8.3	21.6	18.1
BPNBF270000010102	23/08/2021	96.1	112.5	380	27	8.5	< 1	18.1
BPNBF270000010100	23/08/2021	42.5	112.1	10	22	8.3	28.2	18.1
BPBLF270000010002	30/08/2021	10.8	100	< 10	1	8.3	32.9	17
BPNBF270000010102	30/08/2021	52.9	102	410	29	8.3	< 1	15.5
BPNBF270000010100	30/08/2021	29.9	92	10	< 1	8.2	30.4	17.5
BPBLF270000010002	06/09/2021	17.9	107.2	530	16	8.2	32.7	17.2
BPNBF270000010102	06/09/2021	100	107.2	> 2010	280	8.4	< 1	17.9
BPNBF270000010100	06/09/2021	24	101.2	120	100	8.1	30.7	17.9
BPBLF270000010002	09/09/2021	22.3	105	120	42	8.3	33.1	17.4
BPNBF270000010102	09/09/2021	184	98.4	> 2010	1490	8.5	< 1	18.5
BPNBF270000010100	09/09/2021	38.1	100	380	107	8.2	32.6	16.6
BPNBF270000010100	16/09/2021	36.7	98.5	10	24	8.1	32.7	16.5