Annual Environmental Report

2024

Dunmore East

D0170-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2024 AER

This Annual Environmental Report has been prepared for D0170-01, Dunmore East, 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 were no major capital or operational changes undertaken.

1.2 TREATMENT SUMMARY

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

- Dunmore East WWTP with a Plant Capacity PE of 8991, 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
TPEFF3100D0170SW001	Dunmore East WWTP	Treated	Compliant	N/A

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 DUNMORE EAST WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - DUNMORE EAST 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
pH pH units	12	7.70	7.16
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	567	219
Suspended Solids mg/l	12	853	402
COD-Cr mg/l	12	1480	646
Ammonia-Total (as N) mg/l	12	47	23
Hydraulic Capacity	N/A	4210	1213

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 less 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 - TPEFF3100D0170SW000

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	12	N/A	N/A	11	Pass
Dissolved Inorganic Nitrogen (as N) mg/l	35	42	N/A	12	N/A	N/A	3.46	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	2.67	Pass
Total Oxidised Nitrogen (as N) mg/l	35	42	N/A	12	N/A	N/A	3.02	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	12	N/A	N/A	1.51	Pass
Ammonia-Total (as N) mg/l	15	18	N/A	12	N/A	N/A	0.612	Pass
pH pH units	10	10	N/A	12	N/A	N/A	7.60	Pass
Faecal coliforms no./100mls	N/A	N/A	N/A	9	N/A	N/A	864	

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)
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	1	N/A	N/A	0.901	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	1	N/A	N/A	1.07	

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):

Not applicable

Significance of Results:

The WWTP is compliant with the ELV's set in the Wastewater Discharge Licence.

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF3100D0170SW000

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
Downstream	270412, 101660	CW31002096SR7003	Yes	No	No	Yes	Moderate
Downstream	269449, 99588	CW31002096SR7006	Yes	No	No	Yes	Moderate

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 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 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.

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 designated shellfish water quality.

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

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

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - DUNMORE EAST WWTP

2.1.4.1 Treatment Efficiency Report - Dunmore East 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)
TN	N/A	N/A	N/A
TP	N/A	633	N/A
SS	173508	1142	99
cBOD	94549	646	99
COD	278636	4785	98

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

2.1.4.2 Treatment Capacity Report Summary - Dunmore East 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.

Dunmore East WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	5841
DWF to the Treatment Plant (m^3/day)	1947
Current Hydraulic Loading - annual max (m^3/day)	4210
Average Hydraulic loading to the Treatment Plant (m^3/day)	1212.7
Organic Capacity (PE) - As Constructed	8991
Organic Capacity (PE) - Collected Load (peak week)[Note1]	3774
Organic Capacity (PE) - Remaining	5217
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 - DUNMORE EAST 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 2024.			

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	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	No
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	No
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	No

Incident Type	Cause	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2024	4
Number of Incidents reported to the EPA via EDEN in 2024	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 2024 (No. of events)	Total volume discharged in 2024 (m3)	Monitoring Status
SW004	268897, 100760	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW006	269197, 99885	Yes	Medium Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW007	269098, 100659	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW008	268923, 99458	Yes	Low Significance	Meeting Criteria	Unknown	21117	Monitored
TBC	269197, 99885	No	Medium Significance	Meeting Criteria	Unknown	Unknown	Monitored

The contents presented in this table include the most up to date information available at the time of writing. 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 wastewater discharge by metered SWOs during the year (m3)?	21117
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
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
D0170-SIP:01	SW4 (Harbour PS) - Upgrade as required to ensure Storm Water Overflows comply with DoE criteria	C	31/07/2013	Yes	Works Completed		
D0170-SIP:02	SW5 (Strand PS) - Upgrade as required to ensure Storm	C	15/05/2013	Yes	Works Completed		

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
	Water Overflows comply with DoE criteria						
D0170-SIP:03	SW7 (Ard na Coille) - Upgrade as required to ensure Storm Water Overflows comply with DoE criteria	C	31/07/2013	Yes	Works Completed		
D0170-SIP:04	Discharges from SW004 to cease	C	15/05/2013	Yes	Works Completed		
D0170-SIP:05	Dunmore East waste water collection system	C	31/07/2013	Yes	Works Completed		
D0170-SIP:06	Dunmore East waste water treatment plant (WWTP), ancillary works and treated effluent outfall	C	31/12/2013	Yes	Works Completed		
D0170-SIP:07	Eliminate secondary discharges to the Dunmore East Streams	C	30/04/2012	Yes	Works Completed		
D0170-SIP:08	Primary discharge SW000 to cease	C	31/12/2013	Yes	Works Completed		
D0170-SIP:09	Storm water overflow SW005 to cease	C	31/07/2013	Yes	Works Completed		
D0170-SIP:10	SW1 Future (WWTP storm tank) - Upgrade as required to	C	31/07/2013	Yes	Works Completed		

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
	ensure Storm Water Overflows comply with DoE criteria						

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	Included in this AER
D0170-01-Priority Substances Assessment	Yes	No
D0170-01-Shellfish Impact Assessment	Yes	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	Clerical Amendment
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	Yes
List reason e.g. changes to monitoring requirements	Ambient Monitoring Location Changes
Have these processes commenced?	Yes
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER	No

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

Signed: Date: 30/06/2025

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

Head of Environmental Regulation.

7 APPENDIX

Appendix
Appendix 7.1 - Ambient monitoring summary

Ambient Monitoring Summary

The WWDL [Schedule B4] requires Shore and Coastal Water Monitoring.

Shore Monitoring:

4no. samples are required during the main part of the Bathing Season [mid May – end August] at Dunmore Strand. This monitoring is carried out on behalf of Waterford City & County Council by the Health Services Executive (HSE) as part of our Bathing Water Monitoring. Bathing water quality is in compliance with National and European requirements.

Bathing Water Monitoring

Sample Date	E.coli Result	Intestinal Enterococci Result	Water Quality
09/09/2024	137	28	Excellent
26/08/2024	31	96	Excellent
12/08/2024	<10	5	Excellent
30/07/2024	10	3	Excellent
17/07/2024	31	23	Excellent
01/07/2024	<10	<1	Excellent
17/06/2024	<10	1	Excellent
04/06/2024	<10	1	Excellent
30/05/2024	100	62	Excellent

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.

Dunmore Strand 2024 - Find A Beach - Beaches.ie - Beaches.ie

Ambient Points

Ambient Monitoring Point from WWDL (or as agreed with EPA)	*Irish Grid Reference*	EPA Feature Coding Tool code	Receiving Waters Designation (Y/N)				WFD Status
			Bathing Water	Drinking Water	FWPM	Shellfish	
CW31002096SR7003	270412, 101660	TPEFF3100D0170SW001	Yes	No	No	Yes	Poor
CW31002096SR7006	269449, 99588	TPEFF3100D0170SW001	Yes	No	No	Yes	Poor

Ambient Impact Assessment Table

Parameter Name	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS (Mean)	%EQS
Ammonia (as N) mg/l	CW31002096SR7003	0.009	CW31002096SR7006	0.009		
BOD mg/l	CW31002096SR7003		CW31002096SR7006	0.707		
Depth m	CW31002096SR7003	9.750	CW31002096SR7006	16.750		
Dissolved Oxygen %saturation	CW31002096SR7003	100.000	CW31002096SR7006	104.000	70 – 130	
Ortho-Phosphate (as P) mg/l	CW31002096SR7003	0.008	CW31002096SR7006	0.007		
pH pH units	CW31002096SR7003	8.050	CW31002096SR7006	8.050		
Salinity PSU	CW31002096SR7003	32.350	CW31002096SR7006	32.450		
Salinity (Lab) 0/oo	CW31002096SR7003	34.450	CW31002096SR7006	34.000		
Silica (as SI02) mg/l	CW31002096SR7003	0.245	CW31002096SR7006	0.305		
Station Depth m	CW31002096SR7003	9.900	CW31002096SR7006	16..850		
Temperature °C	CW31002096SR7003	12.250	CW31002096SR7006	12.300		
Total Oxidised Nitrogen (as N) mg/l	CW31002096SR7003	0.110	CW31002096SR7006	0.125		
Transparency m	CW31002096SR7003	2.850	CW31002096SR7006	2.000		

Ambient Data Tables

Monitored Entity	Station	Monitoring Point	Sample Date	Ammonia-Total (as N) mg/l	Depth m	Dissolved Oxygen % Saturation	ortho-Phosphate (as P) - unspecified mg/l	pH pH Units	Salinity PSU	Salinity(Lab) 0/oo	Silica (as SiO2) mg/l	StationDepth m	Temperature °C	Total Oxidised Nitrogen (as N) mg/l	Transparency m
Waterford harbour	CW310020096SR7003	Downstream	13/02/2024	<0.01	9.8	98	0.012	8	31.6	34.2	0.42	10	9.1	0.15	1.2
Waterford harbour	CW310020096SR7003	Downstream	22/07/2024	0.011	9.7	102	<0.005	8.1	33.1	34.7	<0.1	9.8	15.4	<0.01	4.5
			Mean	0.009	9.750	100.000	0.008	8.050	32.350	34.450	0.245	9.900	12.250	0.110	2.850

Monitored Entity	Station	Monitoring Point	Sample Date	Ammonia-Total (as N) mg/l	BOD - 5 days (Total) mg/l	Depth m	Dissolved Oxygen % Saturation	ortho-Phosphate (as P) - unspecified mg/l	pH pH Units	Salinity PSU	Salinity(Lab) 0/oo	Silica (as SiO2) mg/l	StationDepth m	Temperature °C	Total Oxidised Nitrogen (as N) mg/l	Transparency m
Waterford harbour	CW310020096SR7006	Downstream	13/02/2024	<0.01	<1	17.2	98	0.011	8	31.7	33.3	0.54	17.3	9.1	0.18	1
Waterford harbour	CW310020096SR7006	Downstream	22/07/2024	0.011	<1	16.3	110	<0.005	8.1	33.2	34.7	<0.1	16.4	15.5	<0.01	3
			Mean	0.009	0.707	16.750	104.000	0.007	8.050	32.450	34.000	0.305	16.850	12.300	0.125	2.000

Note: Where the concentration in the result is less than the limit of detection (LOD), a value of LOD/sqrt(2) was used in calculating the mean and 95%ile concentrations