

Annual Environmental Report

2023



Dungarvan

D0017-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2023 AER

This Annual Environmental Report has been prepared for D0017-01, Dungarvan, 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.

1.2 TREATMENT SUMMARY

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

- Dungarvan (Waterford County) WWTP with a Plant Capacity PE of 25000, 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
TPEFF3100D0017SW001	Dungarvan (Waterford County) 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 DUNGARVAN (WATERFORD COUNTY) WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - DUNGARVAN (WATERFORD COUNTY) 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	7.50	7.43
BOD, 5 days with Inhibition (Carbonaceo mg/l	12	147	69
COD-Cr mg/l	12	327	225
Suspended Solids mg/l	12	96	61
Total Nitrogen mg/l	12	17	11
Total Phosphorus (as P) mg/l	12	2.88	2.03
Hydraulic Capacity	N/A	14904	11542

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 - TPEFF3100D0017SW001

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	40	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	13	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/l)	25	50	N/A	12	N/A	N/A	6.06	Pass
Ammonia-Total (as N) mg/l	10	12	N/A	12	N/A	N/A	0.300	Pass
Total Oxidised Nitrogen (as N) mg/l	10	12	N/A	12	N/A	N/A	5.06	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.35	Pass
E. Coli no./100mls	N/A	N/A	N/A	12	N/A	N/A	270132	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	12	N/A	N/A	1.29	

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)
Enterococci (Intestinal) MPN/100ml	N/A	N/A	N/A	12	N/A	N/A	40574	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	1.53	
Faecal coliforms no./100mls	N/A	N/A	N/A	12	N/A	N/A	14674	

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 TPEFF3100D0017SW001

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.							

Where the receiving water body is not a river or where the data is not in EDEN – the Ambient data will be appended.

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

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 negative impact on the Water Framework Directive status.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - DUNGARVAN (WATERFORD COUNTY) WWTP

2.1.4.1 Treatment Efficiency Report - Dungarvan (Waterford County) 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	8607	6518	24
TN	45090	N/A	N/A

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
COD	955035	170302	82
cBOD	293821	25801	91
SS	257400	54221	79

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

2.1.4.2 Treatment Capacity Report Summary - Dungarvan (Waterford County) 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.

Dungarvan (Waterford County) WWTP	
Peak Hydraulic Capacity (m³/day) - As Constructed	15000
DWF to the Treatment Plant (m³/day)	4920
Current Hydraulic Loading - annual max (m³/day)	14904
Average Hydraulic loading to the Treatment Plant (m³/day)	11542
Organic Capacity (PE) - As Constructed	25000
Organic Capacity (PE) - Collected Load (peak week)^{Note1}	14012
Organic Capacity (PE) - Remaining	10988
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 - DUNGARVAN (WATERFORD COUNTY) 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)
Waterworks Sludge	8384.1	Weight (Tonnes)		0.2	Yes	Yes	Yes

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
1	Water Quality	1	0

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 Lack of tank storage capacity	Yes	No
Uncontrolled release	Network Infrastructure	Yes	No
Uncontrolled release	Emergency overflow caused by power failure	No	Yes

Incident Type	Cause	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	Blocked Sewer	No	Yes
Uncontrolled release	Screen maintenance issue	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2023	5
Number of Incidents reported to the EPA via EDEN in 2023	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 (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 2023 (No. of events)	Total volume discharged in 2023 (m3)	Monitoring Status
SW7	226003, 92494	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW17	226155, 93035	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW4	225035, 92529	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW16	225469, 93224	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
-	226605, 92887	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW8	226609, 92883	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	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 2023 (No. of events)	Total volume discharged in 2023 (m3)	Monitoring Status
SW19	226772, 93041	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW2	225881, 93341	Yes	High Significance	Not Meeting	Unknown	Unknown	Monitored
SW3	225032, 92526	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW14	229535, 92729	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW13	228823, 93823	No	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW20	228714,95042	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW18	226118, 92732	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW9	226201, 93755	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW1	230630, 92118	Yes	High Significance	Not Meeting Criteria	Unknown	Unknown	Monitored
SW12	228075, 94143	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW15	230732, 92542	No	Medium Significance	Not Meeting Criteria	Unknown	Unknown	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 2023 (No. of events)	Total volume discharged in 2023 (m3)	Monitoring Status
-	225091, 92645	No	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW5	225410, 93630	Yes	Low	Meeting Criteria	Unknown	Unknown	Not Monitored
SW6	225515, 93296	Yes	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 wastewater discharge by metered SWOs during the year (m3)?	299681
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?	No
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
D0017-SIP:01	Discharge from SW20 (Kilminnin North) to be discontinued	A	01/11/2011	Yes	Works Completed		
D0017-SIP:02	Implement a programme of works to ensure SW2 only discharge in the event of an emergency, that is, during pump failure at the associated pumping station (see Condition 5.6)	C	01/01/2011	Yes	At Planning Stage		
D0017-SIP:03	Implement a programme of works to ensure SW3 only discharge in the event of an emergency, that is, during pump failure at the associated pumping station (see Condition 5.6)	C	01/01/2011	Yes	At Planning Stage		

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
D0017-SIP:04	SW16 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteria outlined in the DoEHLG	C	01/11/2011	Yes	At Planning Stage	2033	DAP completed 2023
D0017-SIP:05	SW17 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteria outlined in the DoEHLG	C	01/11/2011	Yes	At Planning Stage	2033	DAP completed 2023
D0017-SIP:06	SW18 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteria outlined in the DoEHLG	C	01/11/2011	Yes	At Planning Stage	2033	DAP completed 2023
D0017-SIP:07	SW19 - Upgrading of sewer network, as required, to ensure Storm Water Overflows comply with the criteria outlined in the DoEHLG	C	01/11/2011	Yes	At Planning Stage	2033	DAP completed 2023

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
D0017-01-Priority Substances Assessment	Yes	No
D0017-01-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?	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	No

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

Signed: Date: 28/05/2024

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

There are no Appendices included