

Annual Environmental Report

2018



Wexford town

D0030-02

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2018 AER

This Annual Environmental Report has been prepared for D0030-02, Wexford town, in Wexford 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 TREATMENT SUMMARY

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

- Wexford town WWTP with a Plant Capacity PE of 45000.

Note, onsite Works commenced in Q2 of 2018 at Murntown to transfer loading from Murntown Secondary discharge point (SW002) to Wexford WWTP and ceased discharge from SW002, these works are expected to be completed by end Q1 2019.- (Comply with Schedule C.2). No influent or effluent monitoring was undertaken for the Murntown Secondary discharge in 2018.

The treatment process at Wexford town WWTP includes the following:

1.1.1 WEXFORD TOWN WWTP

Treatment type	Yes / No	Details
Preliminary Treatment	Yes	Screening and Grit Removal
Primary Treatment	No	
Secondary Treatment	Yes	SBR
Nutrient Removal	Yes	P removal dosing
Tertiary Treatment	No	

1.2 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
TPEFF3300D0030SW002	Murntown WWTP (Wexford)		Not monitored	
TPEFF3300D0030SW001	Wexford town WWTP	Treated	Compliant	Not Applicable

1.3 LICENCE SPECIFIC REPORTING INCLUDED IN AER

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

2 TREATMENT PLANT PERFORMAND AND IMPACT SUMMARY

2.1 WEXFORD TOWN WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - WEXFORD TOWN 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
COD-Cr	13	1080	330.62
Suspended Solids	13	523	143.33
Total Nitrogen	13	40.3	21.34
Total Phosphorus (as P)	13	6.4	3.19
BOD, 5 days with Inhibition (Carbonaceous BOD)	13	325	114.5
Hydraulic Capacity	N/A	28702	1302.53

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 - TPEFF3300D0030SW001

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	125	250	N/A	12	0	0	24.31	Pass
Suspended Solids	35	87.5	N/A	12	0	0	7.54	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD)	25	50	N/A	12	0	0	3	Pass
Total Oxidised Nitrogen (as N)	15	18	N/A	11	0	0	5.2	Pass
Total Nitrogen	15	18	N/A	12	0	0	7.4	Pass
Total Phosphorus (as P)	2	2.4	N/A	12	1	1	0.26	Fail
pH	6-9	6-9	N/A	12	0	0	7.31	

Notes:

- 1- This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied
- 2 - For parameters where a mean ELV applies

Cause of Exceedance(s):

Unknown

Significance of Results:

The WWTP is non-compliant on one occasion with the condition 2 ELV's for Total P set in the Wastewater Discharge Licence..

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE

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	Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
Upstream	306186, 121137	TPEFF33300D0030SW001	No	No	No	No	Poor
Downstream	306186, 121137	TPEFF33300D0030SW001	No	No	No	No	Poor

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

Note: Wexford Discharge license was review in 2018, and revised license D0030-02 was issued on the 25th May 2018, which for the first time imposed ambient monitoring on the discharge. As such ambient monitoring only commenced in Q3 2018.

Significance of Results:

The WWTP discharge was non-compliant with the Condition 2 ELV set in the wastewater discharge licence for Total P on one occasion.

The ambient monitoring results meet the required EQS.

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

2.1.4.1 Treatment Efficiency Report

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)	Comment
cBOD	0	36611.33	93.3	
SS	0	50001.9	92.7	
COD	0	198419.48	87.43	
TP	0	1407.11	90.76	
TN	0	39417.81	61.32	

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

2.1.4.2 Treatment Capacity Report Summary

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.

Wexford town WWTP	
Peak Hydraulic Capacity (m3/day) - As Constructed	30375
DWF to the Treatment Plant (m3/day)	10125
Current Hydraulic Loading - annual max (m3/day)	28702

Average Hydraulic loading to the Treatment Plant (m3/day)	1302.53
Organic Capacity (PE) - As Constructed	45000
Organic Capacity (PE) - Collected Load (peak week)	31492
Organic Capacity (PE) - Remaining	13508
Will the capacity be exceeded in the next three years? (Yes/No)	No

2.1.5 SLUDGE / OTHER INPUTS

'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)
Landfill Leachate (delivered by sewer network)	17509	Volume (m3)	5	0.1	Yes	No	No
Landfill Leachate (delivered by sewer network)	3969	Volume (m3)	1	0.1	No	No	No

2.1.6 SLUDGE REMOVAL

The amount of sludge removed from the wastewater treatment plant is shown below along with the transported destination of the sludge from the treatment plant.

Treatment Plant	Sludge type	Quantity	Unit	% Dry Solids	Destination
Wexford town WWTP	Cake Sludge	3688	Weight (Tonnes)	22.27	Ormond Organics _ Composting

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
25	Blocked Sewer	0	25

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	Other	1	No	Yes
Non-compliance	Other	1	No	No
Uncontrolled release	Other	2	No	No

Uncontrolled release	SWO Exceptional rainfall	2	Yes	No
Uncontrolled release	Other	1	No	Yes
Non-compliance	Other	1	No	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2018	6
Number of Incidents reported to the EPA via EDEN in 2018	6
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 Criteria	No. of times activated in 2018 (No. of events)	Total volume discharged in 2018 (m3)	Monitoring Status
SW-2	305761, 119527	Yes	Low	Meeting	Unknown	579617	Monitored
SW-3	303700, 122655	Yes	Low	Meeting	10	Unknown	Not Monitored
SW-4	304788, 120994	No	Low	Meeting	14	Unknown	Not Monitored
SW-5	305374, 121457	Yes	Low	Meeting	45	Unknown	Not Monitored
SW-6	305217, 121695	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW-7	305217, 121659	No	Low	Meeting	8	Unknown	Not Monitored

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 Criteria	No. of times activated in 2018 (No. of events)	Total volume discharged in 2018 (m3)	Monitoring Status
SW-8	304958, 121468	Yes	Low	Meeting	Unknown	Unknown	Not 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?	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?	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
There are no Specified Improvement Programmes for this Agglomeration.							

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	Improvement Source	Expected Completion Date	Comments
There are no Improvements Programme for this Agglomeration.				

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
There is no Licence Specific Report Required in this AER Annual Review.				

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	
Is there a need to request/advise the EPA of any modifications to the existing WWDL?	No
List reason e.g. changes to monitoring requirements	
Have these processes commenced?	
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: 13/05/2019

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 ,

Eleanor Roche

Acting Head of Environmental Regulation.

7 APPENDIX

Appendix

Appendix 7.1 - Ambient monitoring summary

Station	Wexford Upstream SW1		Sation Ref::	TW33002085SY2003		Ammonia N	BOD, 5 days with Inhibition (Carbonaceous)	COD Chemical Oxygen Demand	pH	Suspended Solids	Total Nitrogen N	Total Phosphate P	Visual Inspection
Entity	Entity Reference	Station Easting	Station Northing	Sample Date	Sample Method	mg/l	mg/l	mg/l	pH units	mg/l	mg/l	mg/l	Descriptive
Lower Slaney Estuary	2085	301365		23-July-2018	Grab	0.23	7	1260	8.16	307	1.1	0.58	Clear, some suspended solids
Lower Slaney Estuary	2085	301365		5-Nov-2018	Grab	0.24	9	14	7.52	24.6	2.2	0.14	Yellow Tint, Few SS
				Mean		0.24	8.00	637.00	7.84	165.80	1.65	0.36	
				95%ile		0.24	8.90	1197.70	8.13	292.88	2.15	0.56	
Station	Wexford Downstream SW1		Sation Ref::	TW33002085SY2014									
Lower Slaney Estuary	2085	307402	121085	23-July-2018	Grab	0.24	1	814	8.23	239	1.5	0.24	Clear, some suspended solids
Lower Slaney Estuary	2085	307402	121085	5-Nov-2018	Grab	0.04	1	27	7.59	29.4	0.7	0.12	Clear, Few SS
				Mean		0.14	1	420.5	7.91	134.2	1.1	0.18	
				95%ile		0.23	1	774.65	8.198	228.52	1.46	0.234	

Note

Wexford Discharge license was review in 2018, and revised license D0030-02 was issued on the 25th May 2018, which for the first time imposed ambient monitoring require on discharge, as such ambient monitoring only commenced in Q3 2018