

Annual Environmental Report

2022



Bundoran

D0130-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2022 AER

- 1.1 ANNUAL STATEMENT OF MEASURES
- 1.2 TREATMENT SUMMARY
- 1.3 ELV OVERVIEW
- 1.4 LICENSE SPECIFIC REPORT INCLUDED IN AER

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

- 2.1 BUNDORAN WWTP - TREATED DISCHARGE
 - 2.1.1 INFLUENT SUMMARY - BUNDORAN WWTP
 - 2.1.2 EFFLUENT MONITORING SUMMARY - BUNDORAN WWTP -
 - 2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE -
 - 2.1.4 OPERATIONAL REPORTS SUMMARY FOR BUNDORAN WWTP
 - 2.1.5 SLUDGE/OTHER INPUTS TO BUNDORAN WWTP

3 COMPLAINTS AND INCIDENTS

- 3.1 COMPLAINTS SUMMARY
- 3.2 REPORTED INCIDENTS SUMMARY
 - 3.2.1 SUMMARY OF INCIDENTS
 - 3.2.2 SUMMARY OF OVERALL INCIDENTS

4 INFRASTRUCTURAL ASSESSMENT AND PROGRAMME OF IMPROVEMENTS

- 4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT
 - 4.1.1 SWO IDENTIFICATION AND INSPECTION SUMMARY REPORT
- 4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS
 - 4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY
 - 4.2.2 IMPROVEMENT PROGRAMME SUMMARY
 - 4.2.3 SEWER INTEGRITY RISK ASSESSMENT

5 LICENCE SPECIFIC REPORTS

- 5.1 PRIORITY SUBSTANCES ASSESSMENT

6 CERTIFICATION AND SIGN OFF

- 6.1 SUMMARY OF AER CONTENTS

7 APPENDIX

7.1 AMBIENT MONITORING SUMMARY

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2022 AER

This Annual Environmental Report has been prepared for D0130-01, Bundoran, in Donegal 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)

- Bundoran WWTP with a Plant Capacity PE of 12000, the treatment type is 3N - Tertiary N removal .

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
TPEFF0600D0130SW001	Bundoran 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 BUNDORAN WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - BUNDORAN 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 mg/l	12	493	153
Suspended Solids mg/l	12	274	80
Ammonia-Total (as N) mg/l	12	49	21
pH pH units	12	7.50	7.37
Total Phosphorus (as P) mg/l	12	7.10	3.27
Total Nitrogen mg/l	12	56	26
BOD, 5 days with Inhibition (Carbonaceo mg/l	12	223	93
ortho-Phosphate (as P) - unspecified mg/l	12	7.06	2.46
Hydraulic Capacity	N/A	2948	1715

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'.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF0600D0130SW000

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	17	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	5.49	Pass
Total Oxidised Nitrogen (as N) mg/l	30	36	N/A	12	N/A	N/A	3.85	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/l	25	50	N/A	12	N/A	N/A	1.14	Pass
Temperature °C	25	25	N/A	11	N/A	N/A	4.87	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.56	Pass
Ammonia-Total (as N) mg/l	5	6	N/A	12	N/A	N/A	0.160	Pass
ortho-Phosphate (as	N/A	N/A	N/A	12	N/A	N/A	1.32	

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)
P) - unspecified mg/l								
Nitrate (as N) mg/l	N/A	N/A	N/A	12	N/A	N/A	3.69	
Conductivity @20°C µS/cm	N/A	N/A	N/A	12	N/A	N/A	528	
Dissolved Inorganic Nitrogen (as N) mg/l	N/A	N/A	N/A	12	N/A	N/A	4.01	
Total Nitrogen mg/l	N/A	N/A	N/A	12	N/A	N/A	5.28	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	1.54	
Faecal coliforms cfu/100ml	N/A	N/A	N/A	3	N/A	N/A	3535	
Enterococci (Intestinal) cfu/100ml	N/A	N/A	N/A	3	N/A	N/A	289	
Nitrite (as N) mg/l	N/A	N/A	N/A	12	N/A	N/A	0.164	

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 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.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - BUNDORAN WWTP

2.1.4.1 Treatment Efficiency Report - Bundoran 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	2049	1101	46
COD	95549	12075	87
SS	50253	3924	92
TN	16122	3771	77
cBOD	58461	812	99

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

2.1.4.2 Treatment Capacity Report Summary - Bundoran 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.

Bundoran WWTP	
Peak Hydraulic Capacity (m ³ /day) - As Constructed	6065
DWF to the Treatment Plant (m ³ /day)	1440
Current Hydraulic Loading - annual max (m ³ /day)	2948
Average Hydraulic loading to the Treatment Plant (m ³ /day)	1715
Organic Capacity (PE) - As Constructed	12000
Organic Capacity (PE) - Collected Load (peak week) ^{Note1}	7120
Organic Capacity (PE) - Remaining	4880
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 - BUNDORAN 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)
There were no reportable incidents in 2022.				

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2022	0
Number of Incidents reported to the EPA via EDEN in 2022	0
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
SW2	181745,358971	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
TBC	179576,358779	No	Low Significance	Meeting Criteria	Unknown	Unknown	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)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	
The SWO Assessment included the requirements of relevant of WWDL schedules?	Unknown
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	Unknown

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
D0130-SIP:01	Extension of marine outfall (primary discharge point SW1) as Pollbreen	C	30/06/2012	Yes	Works Completed		
D0130-SIP:02	Installation of new Main Pumping Station and associated storm water holding tanks	C	30/06/2012	Yes	Works Completed		
D0130-SIP:03	Installation of new West End Pumping Station and associated storm water holding tanks	C	30/06/2012	Yes	Works Completed		
D0130-SIP:04	Installation of storm water holding tanks at new WWTP	C	30/06/2012	Yes	Works Completed		
D0130-SIP:05	Provision of new WWTP and ancillary works	C	30/06/2012	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
D0130-SIP:06	SW1 shall be upgraded by 400m subtidal extension of the existing outfall	A	30/06/2012	Yes	Works Completed		
D0130-SIP:07	SW2 shall be upgraded by 40m extension of the existing outfall	A	30/06/2012	Yes	Works Completed		
D0130-SIP:08	Wastewater collection system improvements including sewer diversions and new sewers to reduce surcharging and relieve flooding in town	C	30/06/2012	Yes	Works Completed		

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?	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: 11/10/2023

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

								Parameter	Enterococci	E Coli	Feacal Coliforms	Visual Inspection
								Max.	100	250		--
Laboratory	River Basin District	Surface Waterbody	Sample Template	Sample Reference	Sample Date	Sample Time	Sampled By	Reason	cfu/100mls	MPN/100mls	MPN/100mls	Descriptive
Donegal Co Council	North Western	Coastal: Bundoran Bay	DCC Blue Flag Beach Monitoring	222502228	15-June-2022	10:50	Ronan Mc Ginty	Compliance	3	< 10	<10	Nothing Observed
Donegal Co Council	North Western	Coastal: Bundoran Bay	DCC Blue Flag Beach Monitoring	222502822	27-July-2022	11:05	Ronan Mc Ginty	Compliance	12	86	110	Nothing Observed
Donegal Co Council	North Western	Coastal: Bundoran Bay	DCC Blue Flag Beach Monitoring	222502938	10-Aug-2022	11:30	Ronan Mc Ginty	Compliance	3	< 10	10	Nothing Observed
Donegal Co Council	North Western	Coastal: Bundoran Bay	DCC Blue Flag Beach Monitoring	222503427	7-Sep-2022	12:50	Margaret O'Neill	Compliance	21	10	<10	Nothing observed