

# Annual Environmental Report

2023



Courtown/Gorey

D0046-01

## **CONTENTS**

### **1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2023 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 COURTTOWN WWTP - TREATED DISCHARGE
  - 2.1.1 INFLUENT SUMMARY - COURTTOWN WWTP
  - 2.1.2 EFFLUENT MONITORING SUMMARY - COURTTOWN WWTP -
  - 2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE -
  - 2.1.4 OPERATIONAL REPORTS SUMMARY FOR COURTTOWN WWTP
  - 2.1.5 SLUDGE/OTHER INPUTS TO COURTTOWN 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 2023 AER

This Annual Environmental Report has been prepared for D0046-01, Courtown/Gorey, 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 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)

- Courtown WWTP with a Plant Capacity PE of 36000, 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
TPEFF3300D0046SW001	Courtown 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 COURTTOWN WWTP - TREATED DISCHARGE

#### 2.1.1 INFLUENT MONITORING SUMMARY - COURTTOWN 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	12	5.60	3.58
Total Nitrogen mg/l	12	47	33
BOD, 5 days with Inhibition (Carbonaceo mg/l	12	250	107
Suspended Solids mg/l	12	191	80
COD-Cr mg/l	12	678	267
Hydraulic Capacity	N/A	21371	8303

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 - TPEFF3300D0046SW001

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)
<b>COD-Cr mg/l</b>	125	250	N/A	12	N/A	N/A	31	Pass
<b>Total Oxidised Nitrogen (as N) mg/l</b>	35	42	N/A	12	N/A	N/A	5.72	Pass
<b>Suspended Solids mg/l</b>	35	87.5	N/A	12	N/A	N/A	3.38	Pass
<b>Ammonia-Total (as N) mg/l</b>	25	30	N/A	12	N/A	N/A	0.055	Pass
<b>BOD, 5 days with Inhibition (Carbonaceo mg/l</b>	25	50	N/A	12	N/A	N/A	2.16	Pass
<b>Temperature °C</b>	25	25	N/A	12	N/A	N/A	10	Pass
<b>pH pH units</b>	9	9	N/A	12	N/A	N/A	7.23	Pass
<b>Coliform Bacteria (Total) no./100mls</b>	N/A	N/A	N/A	2	N/A	N/A	72262	
<b>Total Phosphorus (as P) mg/l</b>	N/A	N/A	N/A	12	N/A	N/A	2.44	

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)
<b>Enterococci (Intestinal) cfu/100ml</b>	N/A	N/A	N/A	2	N/A	N/A	2869	
<b>ortho-Phosphate (as P) - unspecified mg/l</b>	N/A	N/A	N/A	12	N/A	N/A	1.57	
<b>Visual Inspection Descriptive</b>	N/A	N/A	N/A	12	N/A	N/A	N/A	
<b>Total Nitrogen mg/l</b>	N/A	N/A	N/A	12	N/A	N/A	7.94	
<b>Faecal coliforms no./100mls</b>	N/A	N/A	N/A	2	N/A	N/A	8244	
<b>E. Coli no./100mls</b>	N/A	N/A	N/A	2	N/A	N/A	8244	

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 TPEFF3300D0046SW001

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	320251, 156046	CW33002081SY4003	No	No	No	No	High

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.

## 2.1.4 OPERATIONAL PERFORMANCE SUMMARY - COURTOWN WWTP

### 2.1.4.1 Treatment Efficiency Report - Courtown 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	8801	6763	23
SS	197397	9361	95
COD	655733	86792	87
TN	81149	21958	73
cBOD	263186	5981	98

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

### 2.1.4.2 Treatment Capacity Report Summary - Courtown 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.

Courtown WWTP	
Peak Hydraulic Capacity (m <sup>3</sup> /day) - As Constructed	23625
DWF to the Treatment Plant (m <sup>3</sup> /day)	7875
Current Hydraulic Loading - annual max (m <sup>3</sup> /day)	21371

Courtown WWTP	
Average Hydraulic loading to the Treatment Plant (m <sup>3</sup> /day)	8303
Organic Capacity (PE) - As Constructed	36000
Organic Capacity (PE) - Collected Load (peak week) <sup>Note1</sup>	22593
Organic Capacity (PE) - Remaining	13407
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 - COURTTOWN 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	219.55	Volume (m3)		0.01	No	No	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	Blocked Sewer	0	1
1	Water Pollution	0	1

### 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	Broken Sewer Pipe	No	Yes
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	Yes

Incident Type	Cause	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	Yes
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	Yes
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	Yes
Abatement equipment off-line	Adverse Weather	No	Yes
Uncontrolled release	SWO exceptional rainfall and overflow expected	No	Yes
Uncontrolled release	Adverse Weather	No	Yes
Uncontrolled release	Adverse Weather	No	Yes
Uncontrolled release	Inadequate Infrastructure	No	Yes
Uncontrolled release	Inadequate Infrastructure	Yes	Yes
Uncontrolled release	Blocked Sewer	No	Yes

### 3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2023	12
Number of Incidents reported to the EPA via EDEN in 2023	12
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
<b>SW007</b>	315976,158544	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
<b>SW006</b>	320245,155959	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
<b>TBC</b>	320054,153253	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)?	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

## SWO Summary

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

Yes

## 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
<b>D0046-SIP:01</b>	Decommissioning of Gorey WWTP and subsequent conversion of infrastructure to storm water storage	C	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:02</b>	Decommissioning of inlet overflow mechanism and subsequent utilisation of WWTP infrastructure for storm water retention purposes	C	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:03</b>	Discharge to cease: SW002 Gorey WWTP	A	31/12/2013	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
<b>D0046-SIP:04</b>	Discharge to cease: SW003 Riverchapel	A	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:05</b>	Discharge to cease: SW004 Paulishaun	A	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:06</b>	Discharge to cease: SW005 Ballinatray	A	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:07</b>	Elimination of all unauthorised discharges/surcharges from waste water works	C	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:08</b>	Upgrading of waste water works to convey all WW for treatment to Courtown WWTP	C	31/12/2013	Yes	Works Completed		
<b>D0046-SIP:09</b>	WWTP upgrade and ancillary works	C	31/12/2013	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
<b>No additional improvements planned at this time.</b>				



### **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
<b>D0046-01-Priority Substances Assessment</b>	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	To include additional SWO identified
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: 08/03/2024

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

Appendix
Appendix 7.1 - Ambient monitoring summary

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	
CW33002081SY4003	320251, 156046	TPEFF3300D0046SW001	No	No	No	No	High

Ambient Impact Assessment Table

Parameter Name	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS (Mean)	%EQS
cBOD mg/l	CW33002081SY 4003	2.176		
Ortho-Phosphate (as P) mg/l	CW33002081SY 4003	0.04		
Ammonia (as N) mg/l	CW33002081SY 4003	0.369		
pH pH units	CW33002081SY 4003	8.288		
Dissolved Oxygen %saturation or mg/l	CW33002081SY 4003	96.825		
Suspended Solids mg/l	CW33002081SY 4003	135.781		
Total Nitrogen (as N) mg/l	CW33002081SY 4003	2.315		

Total Phosphorus (as P) mg/l	CW33002081SY 4003	0.103		
Dissolved Inorganic Nitrogen (as N) mg/l	CW33002081SY 4003	0.732		
Total Oxidised Nitrogen (as N) mg/l	CW33002081SY 4003	0.322		