

# Annual Environmental Report

2018



Cappoquin

D0272-01

## **CONTENTS**

### **1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2018 AER**

#### 1.1 TREATMENT SUMMARY

##### 1.1.1 CAPPOQUIN WWTP

#### 1.2 ELV OVERVIEW

#### 1.3 LICENSE SPECIFIC REPORT INCLUDED IN AER

### **2 TREATMENT PLANT PERFORMAND AND IMPACT SUMMARY**

#### 2.1 CAPPOQUIN WWTP - TREATED DISCHARGE

##### 2.1.1 INFLUENT SUMMARY - CAPPOQUIN WWTP

##### 2.1.2 EFFLUENT MONITORING SUMMARY - CAPPOQUIN WWTP -

##### 2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE -

##### 2.1.4 OPERATIONAL REPORTS SUMMARY FOR CAPPOQUIN WWTP

##### 2.1.5 SLUDGE/OTHER INPUTS TO CAPPOQUIN WWTP

##### 2.1.6 SLUDGE REMOVAL CAPPOQUIN WWTP

### **3 COMPLAINTS SUMMARY**

#### 3.1 REPORTED INCIDENTS SUMMARY

##### 3.1.1 SUMMARY OF INCIDENTS

##### 3.1.2 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**

### **6 CERTIFICATION AND SIGN OFF**

#### 6.1 SUMMARY OF AER CONTENTS

### **7 APPENDIX**

# 1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2018 AER

This Annual Environmental Report has been prepared for D0272-01, Cappoquin, 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 TREATMENT SUMMARY

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

- CAPPOQUIN WWTP with a Plant Capacity PE of 1750

The treatment process includes the following:

### 1.1.1 CAPPOQUIN WWTP

Treatment type	Yes / No	Details
Preliminary Treatment	Yes	Screening
Primary Treatment	No	
Secondary Treatment	Yes	SBR Plant
Nutrient Removal	No	P Removal
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
TPEFF3100D0272SW001	CAPPOQUIN 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 CAPPOQUIN WWTP - TREATED DISCHARGE

#### 2.1.1 INFLUENT MONITORING SUMMARY - CAPPOQUIN 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
Suspended Solids mg/l	14	1353	249.5
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	14	212	101
COD-Cr mg/l	14	764	347
Total Phosphorus (as P) mg/l	14	9.65	5.4
Hydraulic Capacity	N/A	2786	345

#### Significance of Results:

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity. The annual maximum hydraulic loading is greater 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 - TPEFF3100D0272SW003

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 mg/l	125	250	N/A	12	0	0	12	Pass
Suspended Solids mg/l	35	87.5	N/A	12	0	0	4.5	Pass
Total Oxidised Nitrogen (as N) mg/l	35	42	N/A	11	0	0	4.6	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	12	0	0	1.7	Pass
Ammonia-Total (as N) mg/l	10	12	N/A	12	0	0	0.02	Pass
ortho-Phosphate (as P) - unspecified mg/l	5	6	N/A	12	0	0	1.9	Pass
pH pH units	6-9	6-9	N/A	12	0	0	7.4	Pass

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):

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

No ambient monitoring was carried out for 2018.

### 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
<b>cBOD</b>	15433.81	2014.29	86.95	
<b>SS</b>	20229.07	9713.52	51.98	
<b>TN</b>	2737.69	850.47	68.93	
<b>COD</b>	47957.22	7472.33	84.42	
<b>TP</b>	642.47	250.58	61	

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.

CAPPOQUIN WWTP	
Peak Hydraulic Capacity (m3/day) - As Constructed	1734
DWF to the Treatment Plant (m3/day)	578
Current Hydraulic Loading - annual max (m3/day)	2786
Average Hydraulic loading to the Treatment Plant (m3/day)	345
Organic Capacity (PE) - As Constructed	1750
Organic Capacity (PE) - Collected Load (peak week)	1103
Organic Capacity (PE) - Remaining	647
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)
There is no Sludge and Other Input data for the Treatment Plant included in the AER.							

## 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
<b>There is no Sludge data included in the AER.</b>					

## 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
2	Blocked Sewer	0	2

### 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	Plant or equipment breakdown at WWTP	1	No	No
Uncontrolled release	Other	1	No	No

### 3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2018	2
Number of Incidents reported to the EPA via EDEN in 2018	2
Explanation of any discrepancies between the two numbers above	

## 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
<b>SWO05</b>	210055, 99426	Yes	Low	Meeting	106	7641	Monitored
<b>SWO06</b>	210204, 98148	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?	Yes
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
<b>D0272-SIP:01</b>	Provision of new secondary waste water treatment plant and ancillary works	C	30/06/2015	Yes	Works Completed		
<b>D0272-SIP:02</b>	Provision of Twig Lane Pumping Station, storm water detention tank and outfall associated with SW005.	C	30/06/2015	Yes	Works Completed		
<b>D0272-SIP:03</b>	Provision of upgrade collection system for Cappoquin	C	30/06/2015	Yes	Works Completed		
<b>D0272-SIP:04</b>	SW000 Primary Discharge Point to be Discontinued	C	30/06/2015	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>D0272-SIP:05</b>	SW002 Secondary Discharge Point to be Discontinued	C	30/06/2015	Yes	Works Completed		
<b>D0272-SIP:06</b>	SW003 Secondary Discharge Point to be discontinued	C	30/06/2015	Yes	Works Completed		
<b>D0272-SIP:07</b>	SW004 Secondary Discharge Point to be discontinued	C	30/06/2015	Yes	Not Started		The improvement programme will be reviewed by Irish Water to assess the works required to comply with the licence condition on a prioritised basis
<b>D0272-SIP:08</b>	SW005 Provision of storm water overflows to comply with the criteria outlined in the DoECLG 'Procedures and Criteria in relation to Storm Water Overflows' (1995).	C	30/06/2015	Yes	Works Completed		
<b>D0272-SIP:09</b>	SW006 Provision of storm water overflows to comply with the criteria outlined in the DoECLG 'Procedures and Criteria in relation to Storm Water Overflows' (1995).	C	30/06/2015	Yes	Works Completed		

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
<b>There are no Improvements Programme for this Agglomeration.</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 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
<b>There is no Licence Specific Report Required in this AER Annual Review.</b>				



## 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?	No
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: 15/07/2019

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

There are no Appendices included