Annual Environmental Report

2018

Clonmel

D0035-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2018 AER

This Annual Environmental Report has been prepared for D0035-01, Clonmel, in Tipperary 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)

- CLONMEL WWTP with a Plant Capacity PE of 80000

The treatment process includes the following:

1.1.1 CLONMEL WWTP

Treatment type	Yes / No	Details
Preliminary Treatment	Yes	Screening / grit removal
Primary Treatment	Yes	Primary settlement
Secondary Treatment	Yes	Activated sludge process
Nutrient Removal	No	
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
TPEFF2900D0035SW001	CLONMEL 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 CLONMEL WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - CLONMEL 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	22	508	210.66
Total Phosphorus (as P)	22	7.37	3.32
Total Nitrogen	22	41.7	20.98
BOD, 5 days with Inhibition (Carbonaceous BOD)	22	380	141.7
COD-Cr	22	635	323.44
Hydraulic Capacity	N/A	22760	11300

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 tretament 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 - TPEFF2900D0035SW001

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	0	23	0	0	16.32	Pass
Suspended Solids	35	87.5	0	23	0	0	4.8	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD)	25	50	0	23	0	0	1.75	Pass
Ammonia-Total (as N)	5	6	0	23	0	0	0.2	Pass
Total Phosphorus (as P)	2	2.4	0	23	0	0	0.13	Pass
ortho-Phosphate (as P) - unspecified	1.5	1.8	0	23	0	0	0.03	Pass
Fats, Oils & Greases	0	0	0	11	0	0	2.5	
Total Nitrogen	0	0	0	23	0	0	8.32	
pH	0	0	0	23	0	0	7.88	

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

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	222108, 122715	TPEFF2900D0035SW001	No	No	No	No	Good
Downstream	223045, 123054	TPEFF2900D0035SW001	No	No	No	No	Good

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

Significance of Results:

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

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	7338.01	98.76	
TP	0	551.54	96	
SS	0	20180.52	97.7	
TN	0	34955.38	59.95	
COD	0	68597.34	94.9	

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.

CLONMEL WWTP	
Peak Hydraulic Capacity (m3/day) - As Constructed	24912
DWF to the Treatment Plant (m3/day)	8304
Current Hydraulic Loading - annual max (m3/day)	22760

Average Hydraulic loading to the Treatment Plant (m3/day)	11300
Organic Capacity (PE) - As Constructed	80000
Organic Capacity (PE) - Collected Load (peak week)	22372
Organic Capacity (PE) - Remaining	57628
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 tanker)	6176	Volume (m3)		100	Yes	Yes	Yes
Industrial / Commercial Sludge	8613	Volume (m3)		100	Yes	Yes	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
CLONMEL WWTP	Cake Sludge	2933.32	Weight (Tonnes)	13.26	Molaisin 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
42	Blocked Sewer	8	34

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)
Other	Shock load to WWTP	1	No	Yes
Spillage	WWTP biological sludge issue	1	No	Yes

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
SW10	220114, 122222	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW11	219857, 121823	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW12	219857, 121823	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW13	219587, 122128	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW14	219354, 122106	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW15	219067, 122079	Yes	Low	Meeting	Unknown	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
SW16	2222148, 122741	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW2	220758, 122277	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW3	221968, 122705	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW4	221681, 122539	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW5	221177, 122381	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW6	220545, 122268	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW7	220413, 122246	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW8	220203, 121956	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW9	220222, 122251	Yes	Low	Meeting	Unknown	Unknown	Not Monitored

SWO Summary	
How much sewage was discharged via SWOs in the agglomeration in the year (m3)?	N/A
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?	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: 15/04/2019

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

Clonmel Ambient Monitoring Data 2018

Parameter	Ammonia N	Biological Oxyg	COD Chemical	Dissolved Oxyg	Ortho-Phospha	pH	Temperature	TN	TP
Max.	--	--	--	--	--	--	--	...	...
Min.	--	--	--	--	--	--	--	...	...
Test Method	--	--	--	--	--	--	--	...	...
Category	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	Degrees C	mg/l	mg/l
Ambient Monitoring	0.04	2		9.29	0.02	7.9	8.5	2.5	0.1
Ambient Monitoring	0.04	2		9.23	0.02	7.9	8.8	2.7	0.11
Ambient Monitoring	0.02	5		10.13	0.02	8	9.3	3.6	0.1
Ambient Monitoring	0.02	5		10.5	0.02	8	7.2	2.7	0.1
Ambient Monitoring	0.08	0.64	3	10.01	0.003	8.2	10.4	3.7	0.05
Ambient Monitoring	0.07	0.88	11	9.69	0.006	8.1	10.1	2.5	0.04
Ambient Monitoring	0.05	2		10.81	0.02	8.4	19.6	3.3	0.1
Ambient Monitoring	0.05	2		11.01	0.02	8.4	19.1	3.9	0.1
Ambient Monitoring	0.03	2		10	0.02	8.2		4.2	0.1
Ambient Monitoring	0.12	2		9.9	0.02	8.3		4.1	0.1
Ambient Monitoring	0.02	1		8.53	0.009	8.1	16.8	1.5	0.08
Ambient Monitoring	0.11	1.1		8.82	0.013	8.1	16.9	2.1	0.08
Ambient Monitoring	0.08	0.98		9.44	0.007	9.44	16.2	2.9	0.06
Ambient Monitoring	0.09	1.127		9.71	0.008	9.71	16.4	2.7	0.07
Ambient Monitoring	0.09	2		10.62	0.03	10.62	15.3	2.6	0.12
Ambient Monitoring	0.04	1		10.74	0.02	10.74	15.7	2.3	0.12
Ambient Monitoring	0.23	2	5	9.76	0.12	9.76	11.7	2.5	0.12
Ambient Monitoring	0.25	1	5	9.56	0.11	9.56	11.8	2.3	0.12
Ambient Monitoring	0.064	2.23		10.19	0.06	10.19	6.9	3.3	0.12
Ambient Monitoring	0.051	1		9.24	0.062	9.24	7.2	3	0.11

Category	Entity	Station	Station Reference	Easting	Northing	Sample Referer	Sample Date	Analyst Conclus
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18550094	24/01/2018	-
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18550093	24/01/2018	-
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18550167	13/02/2018	-
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18550168	13/02/2018	-
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18550692	09/05/2018	-
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18550691	09/05/2018	-
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18550764	29/05/2018	-
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18550765	29/05/2018	-
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18550831	12/06/2018	
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18550832	12/06/2018	
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18550947	18/07/2018	
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18550948	18/07/2018	
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18551053	08/08/2018	
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18551054	08/08/2018	
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18551215	12/09/2018	
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18551216	12/09/2018	
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18551433	15/10/2018	
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18551434	15/10/2018	
Ambient Monitoring	River Suir	Upstream @ Clonmel WWTP	RS16S022550	222045	122721	18551600	13/11/2018	
Ambient Monitoring	River Suir	Downstream @ Clonmel WWTP	RS16S022580	223018	123080	18551601	13/11/2018	