Annual Environmental Report

2020

Ballycotton

D0516-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2020 AER

This Annual Environmental Report has been prepared for D0516-01, Ballycotton, in Cork 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.

There was no major capital changes undertaken, however the septic tank at Ballycotton was fully de-sludged in December 2020, the first time in many years. Repair works were carried out to the septic tank outfall pipe in June 2020, the repairs consisted of replacing the concrete surround to the pipe at a number of locations along its length.

1.2 TREATMENT SUMMARY

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

- Currently there is no treatment provided at Ballycotton

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
TPEFF0500D0516SW001	BALLYCOTTON WWTP	Untreated	Non-compliant	cBOD mg/l & SS mg/l

1.4 LICENCE SPECIFIC REPORTING INCLUDED IN AER

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

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 BALLYCOTTON WWTP - 2020 - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - BALLYCOTTON WWTP - 2020

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	7	315	170
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	7	494	246.29
COD-Cr mg/l	7	973	595
Hydraulic Capacity	N/A	0	0

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 greater 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’.

2.1.2 EFFLUENT MONITORING SUMMARY -

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)
Suspended Solids mg/l	20% reduction	N/A	N/A	8	3	N/A	216.5	Fail
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	50% reduction	N/A	N/A	8	5	N/A	267.63	Fail
Ammonia-Total (as N) mg/l	N/A	N/A	N/A	1	N/A	N/A	58.8	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	1	N/A	N/A	7.03	
COD-Cr mg/l	N/A	N/A	N/A	8	N/A	N/A	717.5	

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied

Cause of Exceedance(s):

See Section 3.2.

Significance of Results:

Not compliant with WWDL.

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	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
Downstream	199209, 064224	CW05003148BT1001	No	No	No	No	Unassigned

Where the receiving water body is not a river or where the data is not in EDEN – the Ambient data will be appended.

Significance of Results:

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.

The 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 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 - BALLYCOTTON WWTP - 2020

2.1.4.1 Treatment Efficiency Report - BALLYCOTTON WWTP - 2020

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)
COD	38874	46878	-20.59
TP	N/A	N/A	N/A
cBOD	16091	17485	-8.66
TN	N/A	N/A	N/A
SS	11107	14145	-27.35

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

2.1.4.2 Treatment Capacity Report Summary - BALLYCOTTON WWTP - 2020

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.

BALLYCOTTON WWTP - 2020	
Peak Hydraulic Capacity (m^3/day) - As Constructed	N/A
DWF to the Treatment Plant (m^3/day)	N/A
Current Hydraulic Loading - annual max (m^3/day)	N/A
Average Hydraulic loading to the Treatment Plant (m^3/day)	N/A
Organic Capacity (PE) - As Constructed	0
Organic Capacity (PE) - Collected Load (peak week)[Note1]	794
Organic Capacity (PE) - Remaining	0
Will the capacity be exceeded in the next three years? (Yes/No)	Yes

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 - BALLYCOTTON WWTP - 2020

'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 is included below.

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
There were no relevant environmental complaints in 2020.			

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)
Specified % Reduction Value not achieved	WWTP upgrade required to meet ELV	1	Yes	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2020	1
Number of Incidents reported to the EPA via EDEN in 2020	1
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 2020 (No. of events)	Total volume discharged in 2020 (m3)	Monitoring Status
SW003	199250, 64250	Yes	Low	Not Meeting	Unknown	Unknown	Not Monitored
TBC	TBC, TBC	No	Medium	Not yet Assessed	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?	No
The SWO Assessment included the requirements of relevant of WWDL schedules?	N/A
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	N/A

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
D0516-SIP:01	Construct a new primary waste water treatment plant to include inlet screens and appropriately sized primary settlement capacity.	C	31/12/2019	Yes	At Planning Stage	31/12/2024	
D0516-SIP:02	SW002 Secondary Discharge Point to be Discontinued by 31/12/2019	C	31/12/2019	Yes	At Planning Stage	31/12/2024	

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 / or any Operational Improvements	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
Priority Substances Assessment	Yes	2016	No	

5.1 PRIORITY SUBSTANCES ASSESSMENT

The Priority Substances Assessment Report has been included in the AER 2016

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	SWOs
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	No
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	Yes

I certify that the information given in this Annual Environmental Report is truthful, accurate and complete:

Signed: Date: 28/07/2021

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 ,

Katherine Walshe

Acting Head of Environmental Regulation.

7 APPENDIX

Appendix
Appendix 7.1 - Other

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NONCOMPLIANCE SUMMARY

Ballycotton Outlet D0516-01

				Sample Code	89693	90412	91148	91955	92134	92376	92872	
				Sample Date	08/07/2020	05/08/2020	02/09/2020	30/09/2020	07/10/2020	14/10/2020	04/11/2020	
				Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Flow m^3/Day	**ELV**	**Max ELV**	**Frequency**	**Actual**								
BOD mg/L	**n/a**	**n/a**	**6**	6	469	348	51	364	446	181	191	
Interim BOD mg/L - % Reduction	**20**	**n/a**	**6**	5	#DIV/0!	29.6	36.3	-37.9	-195.4	18.1	46.9	100.0
COD mg/L	**n/a**	**n/a**	**6**	6	1183	561	126	899	1383	466	897	
Suspended Solids mg/L	**n/a**	**n/a**	**6**	6	525	77	42	219	274	152	376	
Interim SS mg/l % Reduction	**50**	**n/a**	**6**	5	#DIV/0!	75.6	48.1	-75.2	-115.7	0.7	-65.6	100.0
Orthophosphate (P) mg/l	**n/a**	**n/a**	**6**	**1**	7.03							
Ammonia (N) mg/l	**n/a**	**n/a**	**6**	**1**	58.8							

INLET

			Sample Code	90413	91147	91956	92133	92375	92871
			Sample Date	05/08/2020	02/09/2020	30/09/2020	07/10/2020	14/10/2020	04/11/2020
			Sample Type	Grab	Grab	Grab	Grab	Grab	Grab
Flow m^3/Day	**Frequency**	**Actual**							
BOD mg/L	**6**	**6**		494	80	264	151	221	360
COD mg/L	**6**	**6**		973	207	820	408	516	920
Suspended Solids mg/L	**6**	**6**		315	81	125	127	153	227

Ambient (Coastal)

		f=2
	EQS	
	Mean	**95%ile**
D.O % O_2	80%<95%ile<120%	
Temperature C^o	≤ 1.5 C^o increase	
pH	6 < pH < 9	
BOD mg/L	N/A	
Ammonia (N) mg/l	N/A	
DIN (N) mg/l	≤ 0.25 @ 34 PSU	
TON (N) mg/l	N/A	
E.Coli MPN/100mls	N/A	
Intestinal enterocci MPN/100mls	N/A	
Faecal Coliforms MPN/100mls	N/A	
TN-N (mg/l)		