

Annual Environmental Report

2021



Rathmullen

D0345-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0345-01, Rathmullen, 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.

Rathmullen is on the Irish Water Capital Investment Programme.

1.2 TREATMENT SUMMARY

- Currently there is no treatment provided at Rathmullen . Please refer to section 4 for details of the Programme of Improvements.

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
TPEFF0600D0345SW002	Rathmullen Septic Tank Nr. 2	Untreated	Non-Compliant	TSS, cBOD
TPEFF0600D0345SW001	RATHMULLAN SEPTIC TANK NR. 1	Untreated	Non-Compliant	TSS, cBOD

1.4 LICENCE SPECIFIC REPORTING

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

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1.1 EFFLUENT MONITORING SUMMARY - SW2

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)
Nitrite (as N) mg/l	N/A	N/A	N/A	1	N/A	N/A	0.028	
Suspended Solids mg/l	N/A	N/A	50%	6	5	N/A	69	Fail
COD-Cr mg/l	N/A	N/A	N/A	6	N/A	N/A	239	
Ammonia-Total (as N) mg/l	N/A	N/A	N/A	6	N/A	N/A	20	
BOD, 5 days with Inhibition (Carbonaceous) mg/l	N/A	N/A	20%	6	2	N/A	112	Fail
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	6	N/A	N/A	2.50	
Conductivity @20°C µS/cm	N/A	N/A	N/A	6	N/A	N/A	593	

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)
Enterococci (Intestinal) cfu/100ml	N/A	N/A	N/A	2	N/A	N/A	182000	
pH pH units	N/A	N/A	N/A	6	N/A	N/A	7.22	
Faecal coliforms cfu/100ml	N/A	N/A	N/A	2	N/A	N/A	1053650	
E. Coli MPN/100ml	N/A	N/A	N/A	2	N/A	N/A	2056150	

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):

The agglomeration is not served by a wastewater treatment plant.

Significance of Results:

The WWTP is not compliant with the ELV's set in the Wastewater Discharge Licence.

2.1.2 AMBIENT MONITORING SUMMARY FOR THE UNTREATED DISCHARGE TPEFF0600D0345SW002

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
There is no Ambient data included in the AER.							

Where the receiving water body is not a river or where the data is not in EDEN – the Ambient data are appended in appendix 7.1.

Significance of Results:

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

The ambient monitoring results do not meet the required EQS at the upstream and the downstream monitoring locations. 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 negative impact on the Water Framework Directive status.

2.1.3 EFFLUENT MONITORING SUMMARY - SW1

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)
Conductivity @20°C µS/cm	N/A	N/A	N/A	6	N/A	N/A	590	
BOD, 5 days with Inhibition (Carbonaceous) mg/l	N/A	N/A	20%	6	2	N/A	139	Fail

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)
E. Coli MPN/100ml	N/A	N/A	N/A	2	N/A	N/A	3797000	
Nitrite (as N) mg/l	N/A	N/A	N/A	1	N/A	N/A	0.055	
COD-Cr mg/l	N/A	N/A	N/A	6	N/A	N/A	267	
Suspended Solids mg/l	N/A	N/A	50%	6	4	N/A	163	Fail
pH pH units	N/A	N/A	N/A	6	N/A	N/A	7.48	
Enterococci (Intestinal) cfu/100ml	N/A	N/A	N/A	2	N/A	N/A	66000	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	6	N/A	N/A	3.00	
Ammonia-Total (as N) mg/l	N/A	N/A	N/A	6	N/A	N/A	30	
Faecal coliforms cfu/100ml	N/A	N/A	N/A	2	N/A	N/A	585650	

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):

The agglomeration is not served by a wastewater treatment plant.

Significance of Results:

The WWTP is not compliant with the ELV's set in the Wastewater Discharge Licence.

2.1.4 AMBIENT MONITORING SUMMARY FOR THE UNTREATED DISCHARGE TPEFF0600D0345SW001

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	231780, 429809	CW06007072LS2001	Yes	No	No	Yes	Good

Where the receiving water body is not a river or where the data is not in EDEN – the Ambient data are appended in appendix 7.1

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 negative impact on the Water Framework Directive status.

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 2021.			

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)
Breach of ELV	WWTP upgrade required to meet ELV	1	Yes	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	1
Number of Incidents reported to the EPA via EDEN in 2021	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 (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 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
There are no Storm Water Overflows in this Agglomeration.							

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 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?	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 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
D0345-SIP:01	Install UV or appropriate disinfection on the discharge	C	31/12/2015	Yes	At Planning Stage	2025	
D0345-SIP:02	Primary Discharge Point SW001 to be discontinued	C	31/12/2015	Yes	At Planning Stage	2025	
D0345-SIP:03	Provide a wastewater treatment plant providing secondary treatment to ensure compliance with ELVs as specified in the RL	C	31/12/2015	Yes	At Planning Stage	2025	
D0345-SIP:04	Secondary Discharge Point SW002 to be discontinued	C	31/12/2015	Yes	At Planning Stage		At tender stage 2024+

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

N/A

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
Has a Technical amendment/licence review application been submitted to the Agency by IW?	No
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	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	N/A

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

Signed: Date: 10/05/2022

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 - Ambient Monitoring Data

MONTH	Category	Station	Lab Ref	Date	Ammonia (as N)	BOD	Chlorophyll	COD Chemical Oxygen Demand	Dissolved Inorganic Nitrogen (as N)	Dissolved Oxygen % Saturation	E coli	Intestinal Enterococci	Faecal Coliforms (E. coli)	Orthophosphate	Temperature	Total Oxidised Nitrogen N	Total Nitrogen N	Salinity	pH	Suspended Solids	Chlorophyll
					(mg/l)	(mg/l)	mg/m3	(mg/l)	(mg/l)	(mg/l)	mpn/100mls	cfu/100	cfu/100mls	(mg/l)	°C	(mg/l)	(mg/l)	PSU	pH units	(mg/l)	µg/L
March	Coastal Water Body	Rathmullan - Downstream	212501049	18-Mar-21	NT	2.8	NT	NT	NT	94.2	45	70	308	<0.02	9	NT	NT	24.56	7.3	2.8	NT
May	Coastal Water Body	Rathmullan - Downstream	212502006	18-May-21	NT	3	NT	NT	NT	106.1	0	4	0	0.07	11.3	NT	NT	32.92	8.2	140	NT