Annual Environmental Report

2024

St Johnston

D0538-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2024 AER

This Annual Environmental Report has been prepared for D0538-01, St Johnston, 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.

1.2 TREATMENT SUMMARY

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

- St. Johnston WWTP with a Plant Capacity PE of 1050, the treatment type is 3NP - Tertiary N&P removal .

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
TPEFF0600D0538SW001	St. Johnston 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 ST. JOHNSTON WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - ST. JOHNSTON 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
pH pH units	6	7.50	7.28
Ammonia-Total (as N) mg/l	6	35	18
BOD, 5 days with Inhibition (Carbonaceo mg/l	6	324	101
COD-Cr mg/l	6	618	217
ortho-Phosphate (as P) - unspecified mg/l	6	5.04	1.88
Suspended Solids mg/l	6	378	124
Hydraulic Capacity	N/A	624	284

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 - TPEFF0600D0538SW001

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)
COD-Cr mg/l	125	250	N/A	6	N/A	N/A	44	Pass
Suspended Solids mg/l	35	87.5	N/A	6	N/A	N/A	13	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/l	25	50	N/A	6	1	N/A	10	Pass
Total Oxidised Nitrogen (as N) mg/l	15	18	N/A	6	N/A	N/A	5.11	Pass
Ammonia-Total (as N) mg/l	10	12	N/A	6	N/A	N/A	0.533	Pass
pH pH units	9	9	N/A	6	N/A	N/A	7.21	Pass
ortho-Phosphate (as P) - unspecified mg/l	8	9.6	N/A	6	N/A	N/A	1.51	Pass
Conductivity @20°C µS/cm	N/A	N/A	N/A	6	N/A	N/A	463	

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	6	N/A	N/A	0.059	
Nitrate (as N) mg/l	N/A	N/A	N/A	6	N/A	N/A	5.07	

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 TPEFF0600D0538SW001

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
Upstream	234223, 410072	RS01S010260	No	No	No	No	Good
Upstream	234796, 409888	RS01S010300	No	No	No	No	Good
Downstream	234562, 409921	RS01S010280	No	No	No	No	Good
Downstream	234908, 409786	RS01S010400	No	No	No	No	Good

The table below provides a summary of monitoring results for designated ambient monitoring points. The upstream and downstream annual mean values are shown (mg/l), and the difference between both monitoring stations is given as a percentage of the Environmental Quality Standard (EQS) where relevant.

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
BOD - 5 days (Total) mg/l	RS01S010300	1.60	RS01S010280	1.79	1.50	12.6
BOD - 5 days (Total) mg/l	RS01S010300	1.60	RS01S010400	1.20	1.50	-26.7
BOD - 5 days (Total) mg/l	RS01S010260	1.00	RS01S010400	1.20	1.50	13.3
BOD - 5 days (Total) mg/l	RS01S010260	1.00	RS01S010280	1.79	1.50	52.6
Ammonia-Total (as N) mg/l	RS01S010300	0.261	RS01S010280	0.033	0.065	-349.6
Ammonia-Total (as N) mg/l	RS01S010260	0.011	RS01S010280	0.033	0.065	34.9

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Ammonia-Total (as N) mg/l	RS01S010300	0.261	RS01S010400	0.182	0.065	-120.3
Ammonia-Total (as N) mg/l	RS01S010260	0.011	RS01S010400	0.182	0.065	264.2
ortho-Phosphate (as P) - unspecified mg/l	RS01S010300	0.034	RS01S010280	0.029	0.035	-14.8
ortho-Phosphate (as P) - unspecified mg/l	RS01S010300	0.034	RS01S010400	0.040	0.035	15.4
ortho-Phosphate (as P) - unspecified mg/l	RS01S010260	0.035	RS01S010400	0.040	0.035	12.2
ortho-Phosphate (as P) - unspecified mg/l	RS01S010260	0.035	RS01S010280	0.029	0.035	-18
Conductivity @20°C µS/cm	RS01S010260	379	RS01S010400	405	N/A	
Dissolved Oxygen % Saturation	RS01S010300	104	RS01S010400	102	N/A	
Nitrate (as N) mg/l	RS01S010300	1.22	RS01S010280	0.676	N/A	
Nitrate (as N) mg/l	RS01S010260	0.643	RS01S010400	1.20	N/A	
pH pH units	RS01S010260	7.70	RS01S010400	7.88	N/A	
Suspended Solids mg/l	RS01S010300	12	RS01S010280	4.24	N/A	

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Salinity PSU	RS01S010260	0.100	RS01S010280	0.100	N/A	
Nitrite (as N) mg/l	RS01S010300	0.036	RS01S010280	0.294	N/A	
Total Oxidised Nitrogen (as N) mg/l	RS01S010300	1.26	RS01S010280	1.10	N/A	
Temperature °C	RS01S010260	13	RS01S010400	12	N/A	
Temperature °C	RS01S010260	13	RS01S010280	10	N/A	
Conductivity @20°C µS/cm	RS01S010300	371	RS01S010400	405	N/A	
Nitrate (as N) mg/l	RS01S010300	1.22	RS01S010400	1.20	N/A	
Dissolved Oxygen % Saturation	RS01S010260	106	RS01S010400	102	N/A	
pH pH units	RS01S010300	7.92	RS01S010280	7.69	N/A	
Salinity PSU	RS01S010300	0.100	RS01S010400	0.100	N/A	
Suspended Solids mg/l	RS01S010300	12	RS01S010400	8.15	N/A	
Nitrite (as N) mg/l	RS01S010260	0.278	RS01S010400	0.041	N/A	
Temperature °C	RS01S010300	12	RS01S010400	12	N/A	
Total Oxidised Nitrogen (as N) mg/l	RS01S010300	1.26	RS01S010400	1.24	N/A	

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Total Oxidised Nitrogen (as N) mg/l	RS01S010260	0.920	RS01S010280	1.10	N/A	
Nitrate (as N) mg/l	RS01S010260	0.643	RS01S010280	0.676	N/A	
Conductivity @20°C µS/cm	RS01S010300	371	RS01S010280	374	N/A	
Conductivity @20°C µS/cm	RS01S010260	379	RS01S010280	374	N/A	
Salinity PSU	RS01S010300	0.100	RS01S010280	0.100	N/A	
Nitrite (as N) mg/l	RS01S010300	0.036	RS01S010400	0.041	N/A	
Suspended Solids mg/l	RS01S010260	4.24	RS01S010400	8.15	N/A	
Nitrite (as N) mg/l	RS01S010260	0.278	RS01S010280	0.294	N/A	
Salinity PSU	RS01S010260	0.100	RS01S010400	0.100	N/A	
Dissolved Oxygen % Saturation	RS01S010300	104	RS01S010280	103	N/A	
Dissolved Oxygen % Saturation	RS01S010260	106	RS01S010280	103	N/A	
pH pH units	RS01S010300	7.92	RS01S010400	7.88	N/A	
Suspended Solids mg/l	RS01S010260	4.24	RS01S010280	4.24	N/A	
pH pH units	RS01S010260	7.70	RS01S010280	7.69	N/A	

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Total Oxidised Nitrogen (as N) mg/l	RS01S010260	0.920	RS01S010400	1.24	N/A	
Temperature °C	RS01S010300	12	RS01S010280	10	N/A	

Significance of Results:

The WWTP discharge was 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 impact on the water quality.

A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.

Other causes of deterioration in water quality in the area are unknown.

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 - ST. JOHNSTON WWTP

2.1.4.1 Treatment Efficiency Report - St. Johnston 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)
SS	12805	1485	88

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
TP	N/A	N/A	N/A
COD	22481	4916	78
TN	N/A	N/A	N/A
cBOD	10432	1147	89

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

2.1.4.2 Treatment Capacity Report Summary - St. Johnston 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.

St. Johnston WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	1050
DWF to the Treatment Plant (m^3/day)	0
Current Hydraulic Loading - annual max (m^3/day)	624
Average Hydraulic loading to the Treatment Plant (m^3/day)	283.66
Organic Capacity (PE) - As Constructed	1050
Organic Capacity (PE) - Collected Load (peak week)[Note1]	1260
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 - ST. JOHNSTON 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)
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 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 2024.			

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)
Abatement equipment off-line	Inadequate Operational Procedures/Training	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2024	1
Number of Incidents reported to the EPA via EDEN in 2024	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 2024 (No. of events)	Total volume discharged in 2024 (m3)	Monitoring Status
SW003	235003, 409771	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW004	234930, 409771	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored

The contents presented in this table include the most up to date information available at the time of writing. 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?	No
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?	Unknown

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
D0538-SIP:01	Provide appropriate treatment to ensure compliance with the emission limit values as specified in Schedule A: Discharges and Discharge Monitoring.	C	31/12/2019	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
No additional improvements planned at this time.				

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
D0538-01-Priority Substances Assessment	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?	N/A
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	N/A
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: 19/05/2025

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

There are no Appendices included