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
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	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	Yes
List reason e.g. changes to monitoring requirements	Ambient Monitoring Location Changes
Have these processes commenced?	No
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: 07/06/2023

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

Acting Head of Environmental Regulation.

7 APPENDIX

There are no Appendices included

Annual Environmental Report

2023

Uisce Éireann
Irish Water

Ennis North

D0048-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2023 AER

This Annual Environmental Report has been prepared for D0048-01, Ennis North, in Clare 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)

- Ennis North WWTP with a Plant Capacity PE of 31500, the treatment type is 3P - Tertiary 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
TPEFF0300D0048SW001	Ennis North WWTP	Treated	Non-Compliant	Ammonia-Total (as N) mg/l

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 ENNIS NORTH WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - ENNIS NORTH 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
COD-Cr mg/l	12	346	126
pH pH units	12	7.69	7.50
BOD, 5 days with Inhibition (Carbonaceo mg/l	12	115	46
Total Phosphorus (as P) mg/l	12	5.25	1.88
Ammonia-Total (as N) mg/l	12	43	17
Total Nitrogen mg/l	12	34	19
ortho-Phosphate (as P) - unspecified mg/l	12	2.73	1.47
Suspended Solids mg/l	12	180	37
Hydraulic Capacity	N/A	11996	10557

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 - TPEFF0300D0048SW001

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	12	N/A	N/A	18	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	5.35	Pass
Temperature °C	25	25	N/A	12	N/A	N/A	5.67	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/l	10	20	N/A	12	N/A	N/A	1.41	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.54	Pass
Total Phosphorus (as P) mg/l	2	2.4	N/A	12	N/A	N/A	0.493	Pass

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)
ortho-Phosphate (as P) - unspecified mg/l	1	1.2	N/A	14	N/A	N/A	0.314	Pass
Ammonia-Total (as N) mg/l	1	1.2	N/A	14	2	2	0.570	Fail
Conductivity @25°C µS/cm	N/A	N/A	N/A	12	N/A	N/A	670	
Dissolved Inorganic Nitrogen (as N) mg/l	N/A	N/A	N/A	12	N/A	N/A	8.78	
Total Nitrogen mg/l	N/A	N/A	N/A	12	N/A	N/A	11	

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):

Refer to incidence section of this report

Significance of Results:

The WWTP is not in compliance with the ELV, as set out in the WWDL. The impact on receiving waters is assessed further in section 2.

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF0300D0048SW001

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	133905, 177699	RS27F010680	No	No	No	No	Moderate
Upstream	134524, 177884	RS27F010700	No	No	No	No	Moderate
Downstream	134888, 176818	RS27F010720	No	No	No	No	Moderate

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	RS27F010700	1.57	RS27F010720	1.54	1.50	-2.1
BOD - 5 days (Total) mg/l	RS27F010680	1.89	RS27F010720	1.54	1.50	-23.2
Ammonia-Total (as N) mg/l	RS27F010680	0.117	RS27F010720	0.070	0.065	-72
Ammonia-Total (as N) mg/l	RS27F010700	0.041	RS27F010720	0.070	0.065	44.5

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
ortho-Phosphate (as P) - unspecified mg/l	RS27F010680	0.037	RS27F010720	0.019	0.035	-51.9
ortho-Phosphate (as P) - unspecified mg/l	RS27F010700	0.015	RS27F010720	0.019	0.035	11.7
Total Nitrogen mg/l	RS27F010680	1.00	RS27F010720	1.17	N/A	
Total Nitrogen mg/l	RS27F010700	1.04	RS27F010720	1.17	N/A	
Strontium - unfiltered µg/l	RS27F010700	78	RS27F010720	N/A	N/A	
Uranium - filtered µg/l	RS27F010700	0.555	RS27F010720	N/A	N/A	
True Colour mg/litre Pt Co	RS27F010700	37	RS27F010720	N/A	N/A	
Total Phosphorus (as P) mg/l	RS27F010680	0.101	RS27F010720	0.103	N/A	
Arsenic - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Aluminium - filtered µg/l	RS27F010700	21	RS27F010720	N/A	N/A	
Barium - filtered µg/l	RS27F010700	8.66	RS27F010720	N/A	N/A	
Cobalt - unspecified µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Boron - unspecified µg/l	RS27F010700	7.73	RS27F010720	N/A	N/A	
Copper - unspecified µg/l	RS27F010700	2.56	RS27F010720	N/A	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
Dissolved Oxygen mg/l	RS27F010680	9.71	RS27F010720	9.07	N/A	
Manganese - filtered µg/l	RS27F010700	15	RS27F010720	N/A	N/A	
Iron - unspecified µg/l	RS27F010700	169	RS27F010720	N/A	N/A	
Lead - filtered µg/l	RS27F010700	0.151	RS27F010720	N/A	N/A	
Copper - filtered µg/l	RS27F010700	2.60	RS27F010720	N/A	N/A	
Strontium - filtered µg/l	RS27F010700	78	RS27F010720	N/A	N/A	
Calculated Hardness (CaCO3) mg/l	RS27F010700	176	RS27F010720	N/A	N/A	
Selenium - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Thallium - filtered µg/l	RS27F010700	0.141	RS27F010720	N/A	N/A	
Vanadium - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Total Oxidised Nitrogen (as N) mg/l	RS27F010700	0.581	RS27F010720	N/A	N/A	
Thallium - unspecified µg/l	RS27F010700	0.141	RS27F010720	N/A	N/A	
Temperature °C	RS27F010680	12	RS27F010720	13	N/A	
Uranium - unfiltered µg/l	RS27F010700	0.557	RS27F010720	N/A	N/A	
Suspended Solids mg/l	RS27F010700	5.11	RS27F010720	N/A	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
Antimony - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
BOD, 5 days with Inhibition (Carbonaceo mg/l	RS27F010700	1.41	RS27F010720	1.41	N/A	
Zinc - filtered µg/l	RS27F010700	4.58	RS27F010720	N/A	N/A	
Antimony - unspecified µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Cobalt - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
BOD, 5 days with Inhibition (Carbonaceo mg/l	RS27F010680	1.41	RS27F010720	1.41	N/A	
Chromium - unspecified µg/l	RS27F010700	0.740	RS27F010720	N/A	N/A	
COD-Cr mg/l	RS27F010680	17	RS27F010720	18	N/A	
Total Phosphorus (as P) mg/l	RS27F010700	0.117	RS27F010720	0.103	N/A	
Magnesium - unspecified mg/l	RS27F010700	4.19	RS27F010720	N/A	N/A	
pH pH units	RS27F010680	7.95	RS27F010720	7.89	N/A	
COD-Cr mg/l	RS27F010700	19	RS27F010720	18	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
Beryllium - unfiltered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Mercury - unspecified µg/l	RS27F010700	0.014	RS27F010720	N/A	N/A	
Selenium - unspecified µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Nickel - filtered µg/l	RS27F010700	1.00	RS27F010720	N/A	N/A	
pH pH units	RS27F010700	7.87	RS27F010720	7.89	N/A	
Lead - unspecified µg/l	RS27F010700	0.151	RS27F010720	N/A	N/A	
Alkalinity-total (as CaCO3) mg/l	RS27F010700	165	RS27F010720	N/A	N/A	
Cadmium - filtered µg/l	RS27F010700	0.014	RS27F010720	N/A	N/A	
Cadmium - unspecified µg/l	RS27F010700	0.016	RS27F010720	N/A	N/A	
Silica (as SiO2) mg/l	RS27F010700	2.39	RS27F010720	N/A	N/A	
Sodium - filtered mg/l	RS27F010700	11	RS27F010720	N/A	N/A	
Total Hardness (as CaCO3) mg/l	RS27F010700	161	RS27F010720	N/A	N/A	
Temperature °C	RS27F010700	12	RS27F010720	13	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
Vanadium - unspecified µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Arsenic - unspecified µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Aluminium - unspecified µg/l	RS27F010700	35	RS27F010720	N/A	N/A	
Dissolved Oxygen % O2	RS27F010700	88	RS27F010720	86	N/A	
Chromium - filtered µg/l	RS27F010700	0.732	RS27F010720	N/A	N/A	
Barium - unspecified µg/l	RS27F010700	8.96	RS27F010720	N/A	N/A	
Chloride mg/l	RS27F010700	19	RS27F010720	N/A	N/A	
Beryllium - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Calcium - filtered mg/l	RS27F010700	58	RS27F010720	N/A	N/A	
Boron - filtered µg/l	RS27F010700	8.14	RS27F010720	N/A	N/A	
Dissolved Organic Carbon mg/l	RS27F010700	6.46	RS27F010720	N/A	N/A	
Mercury - filtered µg/l	RS27F010700	0.014	RS27F010720	N/A	N/A	
Calcium - unspecified mg/l	RS27F010700	58	RS27F010720	N/A	N/A	
Magnesium - filtered mg/l	RS27F010700	4.16	RS27F010720	N/A	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
Manganese - unspecified µg/l	RS27F010700	25	RS27F010720	N/A	N/A	
Dissolved Oxygen % Saturation	RS27F010700	89	RS27F010720	N/A	N/A	
Nickel - unspecified µg/l	RS27F010700	1.13	RS27F010720	N/A	N/A	
Potassium - filtered mg/l	RS27F010700	1.73	RS27F010720	N/A	N/A	
Conductivity @25°C µS/cm	RS27F010700	393	RS27F010720	N/A	N/A	
Molybdenum - unspecified µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Sodium - unspecified mg/l	RS27F010700	11	RS27F010720	N/A	N/A	
Zinc - unspecified µg/l	RS27F010700	4.24	RS27F010720	N/A	N/A	
Dissolved Oxygen % O2	RS27F010680	92	RS27F010720	86	N/A	
Molybdenum - filtered µg/l	RS27F010700	0.707	RS27F010720	N/A	N/A	
Dissolved Oxygen mg/l	RS27F010700	9.41	RS27F010720	9.07	N/A	
Potassium - unspecified mg/l	RS27F010700	1.68	RS27F010720	N/A	N/A	
Iron - filtered µg/l	RS27F010700	102	RS27F010720	N/A	N/A	

Significance of Results:

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence for the following: Ammonia-Total (as N) mg/l.

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.

Based on ambient monitoring results a deterioration in ortho-Phosphate, concentrations downstream of the effluent discharge is noted.

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 - ENNIS NORTH WWTP

2.1.4.1 Treatment Efficiency Report - Ennis North 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	173770	18908	89
TP	8804	1742	80
TN	90317	37422	59
COD	592203	65334	89
cBOD	213909	5000	98

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

2.1.4.2 Treatment Capacity Report Summary - Ennis North 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.

Ennis North WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	16272
DWF to the Treatment Plant (m^3/day)	6784
Current Hydraulic Loading - annual max (m^3/day)	11996
Average Hydraulic loading to the Treatment Plant (m^3/day)	10557.1
Organic Capacity (PE) - As Constructed	31500
Organic Capacity (PE) - Collected Load (peak week)[Note1]	24659
Organic Capacity (PE) - Remaining	6841
Will the capacity be exceeded in the next three years? (Yes/No)	No

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 - ENNIS NORTH 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 2023.			

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)
Spillage	Network Infrastructure	No	Yes
Uncontrolled release	Broken Sewer Pipe	No	Yes
Breach of ELV	Plant or equipment calibration at WWTP	Yes	Yes

Incident Type	Cause	Recurring (Y/N)	Closed (Y/N)
Abatement Equipment offline	Plant or equipment breakdown at WWTP	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2023	4
Number of Incidents reported to the EPA via EDEN in 2023	4
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 2023 (No. of events)	Total volume discharged in 2023 (m3)	Monitoring Status
TBC	134436,180553	No	Low Significance	Meeting Criteria	Unknown	Unknown	Monitored
SW2	134851,177466	Yes	Low Significance	Not Meeting Criteria	Unknown	741496	Monitored
TBC	134350,177741	No	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW3	134354,177744	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Monitored
SW4	134682,177994	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Monitored

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)?	741,496
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?	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
D0048-SIP:01	Clonroadmore WWTP installation of tertiary treatment system.	C	31/12/2010	Yes	Works Completed		
D0048-SIP:02	Clonroadmore WWTP rehabilitation of the storm/balance tanks	C	31/12/2010	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
D0048-SIP:03	Clonroadmore WWTP upgrade of the inlet works	C	31/12/2010	Yes	Works Completed		
D0048-SIP:04	Clonroadmore WWTP upgrade of the sludge handling facilities	C	31/12/2010	Yes	Works Completed		
D0048-SIP:05	Clonroadmore WWTP upgrade of the treatment capacity of the current aerator and clarifier tanks to cater for the existing and the short term increase in wastewater loading	C	31/12/2010	Yes	Works Completed		
D0048-SIP:06	collection systems: rehabilitation of sewers with high levels of infiltration.	C	31/12/2010	Yes	At Planning Stage	2037	Ennis DAP ongoing
D0048-SIP:07	collection systems: separation of known surface water connections from the main combined sewer where feasible.	C	31/12/2010	Yes	At Planning Stage	2037	Ennis DAP ongoing
D0048-SIP:08	collection systems: upgrade of satellite pump station overflows	C	31/12/2010	Yes	At Planning Stage	2037	Ennis DAP ongoing
D0048-SIP:09	Secondary discharge from SW2 to be upgraded to a SWO, as defined in DoEHLG 'Procedures & criteria in relation to SWOs'	A	01/01/2011	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
D0048-SIP:10	Tulla road and Francis st pump stations: diversion of surface water away from pump stations	C	31/12/2010	Yes	At Planning Stage	2037	Ennis DAP ongoing
D0048-SIP:11	Tulla road and Francis st pump stations: repair of grit traps	C	31/12/2010	Yes	Works Completed		
D0048-SIP:12	Tulla road and Francis st pump stations: replacement of pumps and improving the pump controls	C	31/12/2010	Yes	At Planning Stage	2037	Ennis DAP ongoing
D0048-SIP:13	Tulla road and Francis st pump stations: upgrade of the combined sewer overflow regime at the pump stations	C	31/12/2010	Yes	At Planning Stage	2037	Ennis DAP ongoing

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
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?	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	Yes
List reason e.g. changes to monitoring requirements	Ambient Monitoring Location Changes
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: 13/11/2024

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

Site Visit Report

The site visit process is a sample on a particular day of an installation's compliance with some of its licence conditions. Where non-compliance against a particular condition has not been reported, this should not be construed to mean that there is full compliance with that condition of the licence.

Instructions and actions arising from the visit shall be addressed, or where applicable noted, by the licensee in order to ensure compliance, to improve the environmental performance of the installation and to provide clarification on certain issues.

The licensee shall take the actions specified to close out the non-compliances and observations raised in this Site Visit Report.

Licensee

Name of Installation	Ennis North
Licensee	Irish Water
Licence Register No.	D0048-01
CRO Number	
Site Address	Clare
Site Visit Reference No.	SV15690

Report Detail

Issue Date	16/07/2018
Prepared By	David O'Connor

Site Visit Detail

Date Of Inspection	19/06/2018	**Announced**	Yes
Time In	11:45	**Time Out**	14:45
Agency Personnel On Site	David O'Connor		
Licensee Personnel and Role	Brian Cleary (Clare Co. Co. under SLA with IW) Martin Gardiner (Clare Co. Co. under SLA with IW) Sile Murphy (Clare Co. Co. under SLA with IW) Maurice Hourigan (IW) Valerie Hannon (IW) Seamus Walsh (IW) Gerard Kett (Clare Co. Co. under SLA with IW)		

Photo Taken	Yes	**Samples Taken**	No	**Video Taken**	No
Odour Assessment	No				

Scope

To check licence compliance and assess the actions taken by Irish Water to identify and resolve a recent incident at the waste water treatment plant.

Media

- Surface water.
- Waste water.

Site Areas Inspected

- Waste water treatment plant.

Documents Inspected

- 2017 & 2018 Final effluent monitoring results.
- 2018 Ambient monitoring results.

1. General

		Answer	Condition Number	Non Compliance	Observation
1.1	Have you recorded emission limit value breaches to date in the current year?	Yes			

Comment / Corrective Action

Emission limit value (ELV) breaches were recorded for BOD (16 mg/l), Suspended Solids (89 mg/l) and Total Phosphorus (2.23 mg/l) on 15/05/2018.

		Answer	Condition Number	Non Compliance	Observation
1.2	Has an Irish Water process optimisation visit been completed at this plant?	Yes			

		Answer	Condition Number	Non Compliance	Observation
1.3	Is landfill leachate accepted at the plant?	No			

		Answer	Condition Number	Non Compliance	Observation
1.4	Is there a significant discharge from industry into the plant?	No			

		Answer	Condition Number	Non Compliance	Observation
1.5	Is the plant overloaded?	Yes			

Comment / Corrective Action

The WWTP is hydraulically overloaded.

		Answer	Condition Number	Non Compliance	Observation
1.6	Is the plant oversized for the amount of influent coming into the plant?	No			

		Answer	Condition Number	Non Compliance	Observation
1.7	Are critical spare parts and equipment readily available?	Yes			

Comment / Corrective Action

Critical spare parts and equipment are retained onsite.

		Answer	Condition Number	Non Compliance	Observation
1.8	In the event of a power-cut, is there a contingency plan in place at the plant?	Yes			

Comment / Corrective Action

A back up diesel generator is maintained onsite.

		Answer	Condition Number	Non Compliance	Observation
1.9	Is the composite sampler operational at all times the discharge is taking place?	No			

Comment / Corrective Action

The composite sampler was not functioning on the day of the site visit.

Corrective Action Required

Irish Water shall ensure that the composite sampler is operational as per the Licence requirements.

		Answer	Condition Number	Non Compliance	Observation
1.10	Is there visual evidence of pollution at, or downstream of, the discharge point to the receiving water?	Not Checked			

Comment / Corrective Action

The discharge point into the River Fergus was not accessible on the day of the site visit.

2. Inlet Works

		Answer	Condition Number	Non Compliance	Observation
2.1	Is there screening in place at the inlet works?	Yes			

Comment / Corrective Action

Screening takes place at the two main pumping stations that feed the WWTP.

		Answer	Condition Number	Non Compliance	Observation
2.2	Is the screening system at the plant inlet working adequately?	No			

Comment / Corrective Action

The plant operator stated that there has been issues of screen blinding. The issue is being managed and the pumping stations are checked twice a day. Irish Water is engaging with a Contractor to resolve these issues.

		Answer	Condition Number	Non Compliance	Observation
2.3	Is the screening system at the plant inlet being inspected and maintained?	Yes			

Comment / Corrective Action

The screens are checked twice a day.

		Answer	Condition Number	Non Compliance	Observation
2.4	Is there grit removal at the inlet works?	Yes			

Comment / Corrective Action

Grit removal takes place at the two main pumping stations that feed the WWTP.

		Answer	Condition Number	Non Compliance	Observation
2.5	Is there visual evidence of surcharging at the inlet?	No			

3. Aeration Basin

		Answer	Condition Number	Non Compliance	Observation
3.1	Is there good evidence of mixing in the aeration basin?	Yes			

		Answer	Condition Number	Non Compliance	Observation
3.2	Is the appearance of the mixed liquor satisfactory?	Yes			

		Answer	Condition Number	Non Compliance	Observation
3.3	Is the dissolved oxygen probe cleaned and maintained?	Yes			

Comment / Corrective Action

The dissolved oxygen probes are cleaned once a week.

		Answer	Condition Number	Non Compliance	Observation
3.4	Does the operator monitor the mixed liquor suspended solids/cone level at the plant?	Yes			

		Answer	Condition Number	Non Compliance	Observation
3.5	What is the target mixed liquor suspended solids/cone at the plant?	Yes			

Comment / Corrective Action

The target MLSS is 3,500 mg/l (Summer) and 4,500 mg/l (Winter).

		Answer	Condition Number	Non Compliance	Observation
3.6	From review of records for mixed liquor suspended solids/cone at the plant, do the records show variations outside the target range and was corrective action taken as required?	Yes			

		Answer	Condition Number	Non Compliance	Observation
3.7	Is the return sludge pump operating?	Yes			

		Answer	Condition Number	Non Compliance	Observation
3.8	Does the operator know the sludge return rate from the clarifier to the aeration basin?	Yes			

	Answer	Condition Number	Non Compliance	Observation

3.9	Is the operator aware of the target optimum sludge age?	Yes			

		Answer	Condition Number	Non Compliance	Observation
3.10	Is there any evidence of operational problems?	No			

4. Phosphate Treatment

		Answer	Condition Number	Non Compliance	Observation
4.1	Is there dosing for phosphate removal at the plant?	Yes			

		Answer	Condition Number	Non Compliance	Observation
4.2	Is the dosing rate for phosphate removal at the plant known?	No			

		Answer	Condition Number	Non Compliance	Observation
4.3	Is the dosing rate for phosphate removal adjusted?	No			

		Answer	Condition Number	Non Compliance	Observation
	Is the dosing for phosphate removal at the plant regulated by flow?	No			

		Answer	Condition Number	Non Compliance	Observation
4.5	Is there duty/standby pump(s) in operation?	No			

Comment / Corrective Action

It was noted during the site visit that the ferric dosing system does not have a standby pump in place.

Corrective Action Required

Irish Water should install a standby pump with an automatic switchover on the ferric dosing system.

		Answer	Condition Number	Non Compliance	Observation
	Is pump maintenance completed on a regular basis?	Yes			

		Answer	Condition Number	Non Compliance	Observation
4.7	Is there automatic switchover between duty and standby pumps?	Not Applicable			

5. Settling Tank/Final Clarifier

		Answer	Condition Number	Non Compliance	Observation
5.1	Are the overflow weirs in good condition?	Yes			

		Answer	Condition Number	Non Compliance	Observation
5.2	Are the tiles/overflow channel clean?	Yes			

		Answer	Condition Number	Non Compliance	Observation
5.3	Is the bridge wheel in good condition?	Yes			

		Answer	Condition Number	Non Compliance	Observation
5.4	Is there any evidence of operational problems?	Yes			

Comment / Corrective Action

Significant foam was noted in both clarifiers (see photograph 1). On the day of the site visit, the foam was being contained behind the scum baffle, however there is a risk that this foam may carryover into the final effluent, especially during high wind conditions.

Sludge management issues were also noted during the site visit. The sludge belt press at the WWTP was not upgraded as part of the WWTP upgrade and does not have the capacity to adequately manage the volumes of sludge being wasted from the system.

Corrective Action required

Irish Water is required to take all steps to reduce the foam volume in the clarifiers.

Irish Water is required to implement measures at the WWTP to improve sludge management.

6. Site Specific Issues

		Answer	Condition Number	Non Compliance	Observation
6.1	Aeration failure incident.	Checked			

Comment / Corrective Action

An incident notification ref. no. INCI014561 was reported to the EPA on 22/06/2018, which reported that a blower at the WWTP failed. As a result of the aeration failure, the dissolved oxygen (DO) in aeration tank no. 1, significantly dropped which ultimately led to ELV breaches at the WWTP. At the time of the incident the SCADA system indicated that the blower for the tank was active. Upon further investigation, Irish Water later determined that the blower had failed and that there was an issue with the SCADA system.

Corrective Action Required

Irish Water shall ensure that all relevant staff are fully trained in the use of all instrumentation at the WWTP, including all relevant functionality of the SCADA system.

Photographs

Photograph 1: Thick foam observed on clarifier no. 1.

Summary

The Ennis North WWTP was upgraded in 2016 and was initially under the operation of the design build contractor until March 2018, when it was handed over to Clare Co. Co. The new WWTP is fitted with modern instrumentation and is heavily automated and alarmed. Irish Water is required to ensure that all relevant staff are fully trained and competent in the use of all relevant onsite instrumentation.

The EPA is also concerned with the volume of foaming observed in both clarifiers of the WWTP on the day of the site visit. This foaming needs to be addressed by Irish Water.

FOLLOW-UP ACTIONS

You are required to complete the instructions and actions, as outlined in this report, within the specified timeframe. Where required, you shall respond to actions specified in Compliance Investigations within the required timeframe.The licensee shall maintain documentary evidence, for review by the EPA, that the prescribed corrective actions were completed within the required timeframe.

(i) Compliance Investigations

You are not required to respond directly to items contained in this EPA site visit report; where an issue requires a direct response, the EPA will generate a Compliance Investigation through the EDEN system. You will receive notification when a Compliance Investigation instruction or action is generated.

(ii) Publication of reports and licensee response.

Please note that this Site Visit Report will be made available for public viewing via the EPA's Licence Enforcement Access Portal within one day of the issue date and will be published on the Licence Details Page of the EPA's website, www.epa.ie, that relates to your licence 60 calendar days after the issue date.

You may if you choose submit, within 45 calendar days of the issue date of this Site Visit Report, a Licensee Public Response that will be published alongside the Site Visit Report. This Response, should you wish to avail of it, provides you with an opportunity to inform the public about how you are implementing the actions set out in the report, activities underway, timescales and target completion dates. Please be aware that the content of your Licensee Public Response must be factual and should not breach the EPAs stated online publication standards.

If you wish to submit a Licensee Public Response to an EPA Site Visit Report, you should do this by clicking on the 'Make a Response' link on the Site Visits page in EDEN. A .pdf document containing your response can be attached and submitted from here.

(iii) Response to Site visit report

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Please quote the above Inspection Reference Number in any future correspondence in relation to this Report.

Site Visit Report

The site visit process is a sample on a particular day of an installation's compliance with some of its licence conditions. Where non-compliance against a particular condition has not been reported, this should not be construed to mean that there is full compliance with that condition of the licence.

Instructions and actions arising from the visit shall be addressed, or where applicable noted, by the licensee in order to ensure compliance, to improve the environmental performance of the installation and to provide clarification on certain issues.

The licensee shall take the actions specified to close out the non-compliances and observations raised in this Site Visit Report.

Licensee

Name of Installation	Ennis North
Licensee	Irish Water
Licence Register No.	D0048-01
CRO Number	
Site Address	Clare
Site Visit Reference No.	SV17528

Report Detail

Issue Date	05/06/2019
Prepared By	David O'Connor

Site Visit Detail

Date Of Inspection	09/05/2019	**Announced**		Yes	
Time In	10:00	**Time Out**		13:00	
Agency Personnel On Site	David O'Connor				
Licensee Personnel and Role	Valerie Hannon (IW) Triona Acheson (Clare Co. Co. under SLA to IW) Sinead McDonnell (Clare Co. Co. under SLA to IW) Ger Kett (Clare Co. Co. under SLA to IW) Maurice Hourigan (IW) Ann O'Sullivan (Clare Co. Co. under SLA to IW) Noel Clery (Clare Co. Co. under SLA to IW)				
Photo Taken	Yes	**Samples Taken**	No	**Video Taken**	No
Odour Assessment	No				

Scope

To review the operation and management of the Ennis North waste water treatment plant (WWTP) and progress with the open Compliance Investigation (ref. no. CI000012).

Media

- Surface water.
- waste water.

Site Areas Inspected

- Waste water treatment plant (WWTP)
- Tulla road pump station.

Documents Inspected

- 2018 & 2019 final effluent monitoring results.
- 2018 & 2019 ambient monitoring results.
- Instrumentation calibration records.

1. General

		Answer	Condition Number	Non Compliance	Observation
1.1	Have you recorded emission limit value breaches to date in the current year?	Yes			

Comment / Corrective Action

Emission limit value breaches were recorded for ammonia in March and April 2019. These breaches were due to a mechanical failure at the WWTP which was reported to the EPA under Incident Ref. No. INCI016229.

		Answer	Condition Number	Non Compliance	Observation
1.2	Is the plant overloaded?	Yes			

Comment / Corrective Action

It was noted during the site visit that the WWTP becomes hydraulically overloaded during heavy rainfall events. This is due to water ingress issues within the network.

		Answer	Condition Number	Non Compliance	Observation
1.3	Has an Irish Water process optimisation visit been completed at this plant?	Yes			

		Answer	Condition Number	Non Compliance	Observation
1.4	Are there any measures in place to address the operational issues identified during the process optimisation visit?	Yes			

Comment / Corrective Action

Irish Water have implemented a number of measures at the WWTP to address the issues at the plant. Irish Water are in the process of carrying out further site improvements such as:

- Refurbishment of clarifier No. 2.
- Spray bars in both clarifiers to reduce foam volumes.

2. Aeration Basin

		Answer	Condition Number	Non Compliance	Observation
2.1	Is the operator aware of the target optimum sludge age?	Yes			

Comment / Corrective Action

The optimum sludge age for the WWTP is 9-10 day. The current sludge age is 30 days due to the limitations on sludge wasting.

		Answer	Condition Number	Non Compliance	Observation
2.2	Is there any evidence of operational problems?	Yes			

Comment / Corrective Action

Excessive foam attributed to Nocardia bacteria, was noted in both aeration tanks at the WWTP (see photograph 1). Irish Water stated that due to the limited sludge treatment capacity at the site, Irish Water are not able to waste the appropriate sludge volume to optimise the performance of the WWTP.

Corrective Action required

Irish Water are required to implement measures at the WWTP to ensure that the appropriate volume of sludge can be removed from the system to optimise the performance of the WWTP. In the interim, Irish Water need to consider short-term measures such as tankering, until the sludge management facilities have been upgraded.

3. Settling Tank/Final Clarifier

		Answer	Condition Number	Non Compliance	Observation
3.1	Is there any evidence of operational problems?	Yes			

Comment / Corrective Action

During the site visit, sludge was observed overflowing from clarifier No. 2 and into the overflow channel (see photograph 2).

Corrective Action Required

Irish Water shall implement mitigation measures at the WWTP to prevent sludge carryover into the final effluent.

4. Pump Station

		Answer	Condition Number	Non Compliance	Observation
4.1	Is the Pump Station designed as a Storm Water Overflow (SWO)?	Yes			

Comment / Corrective Action

It was noted during the site visit, that numerous overflows occurred during the month of April 2019. These overflows have been largely attributed to the ingress issues within the network.

Corrective Action Required

Irish Water is required to ensure that the storm water overflows associated with the Tulla road and Francis street pumping stations, comply with the criteria set out in the Department of the Environments publications entitled, *"Procedures and criteria in relation to storm water overflows".*

		Answer	Condition Number	Non Compliance	Observation
4.2	Were there any breakdowns at any of the pumping stations on the network in the past 12 months?	Yes			

Comment / Corrective Action

One of the two screens was not in operation on the day of the site visit due to mechanical failure. Irish Water stated that the screens serving both the Tulla road and Francis street pumping stations regularly breakdown. Irish Water are engaging with the supplier to address the issue.

		Answer	Condition Number	Non Compliance	Observation
4.3	Is there a screen at the pumping station?	Yes			

Photographs

Photograph 1: Excessive foaming observed in aeration tank 1.

Photograph 2: Sludge carryover observed in clarifier No. 1.

Summary

The primary issue identified during the site visit is the sludge management issues.

Irish Water is required to complete the corrective action raised in this site visit report.

FOLLOW-UP ACTIONS

You are required to complete the instructions and actions, as outlined in this report, within the specified timeframe. Where required, you shall respond to actions specified in Compliance Investigations within the required timeframe.The licensee shall maintain documentary evidence, for review by the EPA, that the prescribed corrective actions were completed within the required timeframe.

(i) Compliance Investigations

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Please quote the above Inspection Reference Number in any future correspondence in relation to this Report.

Site Visit Report

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Instructions and actions arising from the visit shall be addressed, or where applicable noted, by the licensee in order to ensure compliance, to improve the environmental performance of the installation and to provide clarification on certain issues.

The licensee shall take the actions specified to close out the non-compliances and observations raised in this Site Visit Report.

The licensee may also be requested to provide a response to the Environmental Protection Agency (hereafter referred to as the Agency) in relation to the site visit report findings.

Licensee

Name of Installation	Ennis North
Licensee	Uisce Éireann
Licence Register No.	D0048-01
CRO Number	530363
Site Address	Clare
Site Visit Reference No.	SV27319

Report Detail

Issue Date	04/08/2023
Prepared By	Michael McDonagh

Site Visit Detail

Date Of Inspection	13/07/2023		
Time In	10:30	**Time Out**	14:15
EPA Inspector(s)	Michael McDonagh		
Additional Visitors			
Licensee Personnel and Role	Representing Uisce Éireann: Mr. Nemy Achionye, Mr. Brian Murphy Mr. Ronan O'Shea Representing Clare County Council (working in partnership with Uisce Éireann): Mr Noel Cleary, Mr Gerard Kett, Mr Colm Clohessy and Ms. Sinead McDonnell.		

Summary

This site visit was to primarily to review the network of the Ennis agglomeration and also included a visit to the waste water treatment plant. Uisce Éireann need to establish if the plant is being desludged at an appropriate frequency.

Waste water discharges from Ennis North were identified during the characterisation for the third cycle of Ireland's River Basin Management Plan as a significant pressure on the Fergus putting it at risk of not meeting its environmental objective of good status. Discharges from storm water overflow outlets on the collecting system are a significant pressure and adversely impacting the Fergus as identified in the Water Framework Directive Characterisation Assessment.

Storm water overflows are a significant pressure impacting this receiving water. There is a lack of information on the frequency of discharge of many of the overflows in this agglomeration. There are also outstanding specified improvements in relation to the rehabilitation of the sewer network.

Uisce Éireann are required to complete all the corrective actions as set out in this site visit report.

Site Areas Inspected

Waste water treatment plant.

Primary Discharge Point

Pump Stations

Storm Water Overflows

Documents Inspected

The following documentation were submitted by Uisce Éireann on 10 July 2023.

- Effluent monitoring results 2022 and 2023 to date;
- Ambient monitoring results 2022 and 2023 to date;

The following information was requested of Uisce Éireann and where available was assessed prior to the visit:

- Annual Environmental Report 2022.
- Information on the SWOs in the Ennis North network.
- Drawings of the SWOs/CSOs on the Network in Ennis North and schematics of the type of SWO or overflow mechanisms
- 2022 Event Duration Monitoring data for Ballyallia Main PS, Francis St PS and Tulla Road PS.
- Data on Flow to treatment, flow to storm tank(s) and effluent flow values for 2021 and 2022.
- Details of the SWO assessments to meet Department Criteria (e.g. formula A calculations and storage information).
- Co-ordinates for ENNIS NORTH - BALLYALLIA MAIN PS.
- monitoring data and calculations to support the reported 458,391 m3 of sewage was discharged via monitored SWOs in the agglomeration in the year (2022 AER).

The following additional information was submitted after the site visit:

- Desludging records for 2022 and 2023 to date; and
- SVI and Cone data for 2022 and 2023 to date.

1. General

		Answer	Condition Number	Non Compliance	Observation
1.1	Have you had any emission limit value breaches in the past 12 months?	Checked			

Comment / Action Required

One breach of ammonia emission limit value (ELV)(2.381mg/l vs ELV 1mg/l) was recorded in December 2022.

Corrective Action Required:

Uisce Éireann shall investigate the causes of this ELV breach and implement measures to ensure that the final effluent complies with the ELVs in the licence at all times.

2. Inlet Works

		Answer	Condition Number	Non Compliance	Observation
2.1	Are there overflows at the plant?	Yes			

Comment / Action Required

There are two storm tanks at the Inlet to the plant. On the day of the inspection, both storm tanks were almost full (see photograph 1). The capacity of untreated waste water in the storm tanks is reported as 766m3 per tank.

Discharges of untreated effluent occur frequently from the storm tanks via SW2. It should be noted that SW2 was a secondary discharge and was required to be upgraded to a storm water overflow by 1 January 2011.

The 2022 Ennis North AER indicates that none of the SWOs meet the Department criteria for SWOs. There is no safe and permanent access to SW2 and on the day of the inspection the SW2 outfall point was not accessible.

Based on the data submitted by Uisce Éireann prior to the site visit for 2022, for 133 of the 360 days reported, there was a storm water discharge via SW2. The 2022 AER reports that a total of 458,391 m3 discharged via SW2 in 2022. From the data, it is clear that this SWO discharges untreated effluent almost daily in the winter.

Actions Required

Uisce Éireann are required to:

1. Reassess SW2 against Department criteria and clarify why it is failing the criteria.

2. Provide safe access to SW2 outfall point as required by Condition 4.6 of the WWDL for this agglomeration.

3. Aeration Basin

		Answer	Condition Number	Non Compliance	Observation
3.1	Is there any evidence of operational problems?	Checked			

Comment / Action Required

There were some localised areas of aeration tank no. 1 with what appeared to be Nocarrdia bacteria type scum which had crusted over (see photograph no. 2) and this indicates operational problems. The Dissolved Oxygen (D.O.) level in aeration tank no. 1 was found to be reading 2.57mg/l and 1.13mg/l in aeration tank no. 2.

Action required:

Uisce Éireann are required to:

1. Investigate the cause of the excess foam on the surface in the aeration tank and put in place appropriate measures to manage it;

2. Complete a profile of the dissolved oxygen levels across both aeration tanks to establish if the oxygen delivery system is operating adequately;

3. Ensure that there are appropriate levels of oxygen in the aeration basins at all times.

4. Clarify whether the plant is being desludged at the appropriate rates and whether there is any limiting factor preventing this from occurring.

4. Phosphate Treatment

		Answer	Condition Number	Non Compliance	Observation
4.1	Is there dosing for phosphate removal at the plant?	Yes			

Comment / Action Required

It is noted that the last site visit report (SV23807) stated that the dosing pumps were scheduled for replacement end of Q3 of 2022. However, these works have not been completed. Uisce Éireann personnel stated that there is a planned upgrade to the phosphate system planned within the next two months. This upgrade is to include the installation of an additional two pumps to allow for four pumps (one duty/standby for each stream).

Action required:

Uisce Éireann are required to give this greater priority and to revert with a timeframe by which this will be completed.

5. Settling Tank/Final Clarifier

		Answer	Condition Number	Non Compliance	Observation
5.1	Is there any evidence of operational problems?	Checked			

Comment / Action Required

The V-notch weirs in the clarifier No. 1 appeared to be flooded on the day of the inspection with high flow going through the plant. Some 'pin floc' solids were observed overflowing the v-notch weirs and discharging on the date of this site visit (see photograph no.3). This may be evidence of denitrification occurring in the clarifier and can lead to sludge carryover and suspended solids being an issue in the final effluent.

Uisce Éireann are required to:

1. Establish if the desludging arrangements at this plant are adequate and appropriate.

2. Review the control of flows through the plant to ensure that it is not overloaded.

3. Investigate what is giving rise to the 'pin floc' carry over.

4. Increase the frequency of effluent sampling to weekly until this brought under control.

6. Pump Station

		Answer	Condition Number	Non Compliance	Observation
6.1	Is the Pump Station designed as a Storm Water Overflow (SWO)?	Yes			

Comment / Action Required

Tulla Road Pump Station

The The Tulla road pump station was visited as part of the site inspection. This pump station has two screens and operates with three foul pumps and three storm pumps, which operate on different cycles. There is a flow monitor at the inlet to the main WWTP and this informs what volume is coming from the Tulla Road Pump station. There is no monitor on the pump station itself. Uisce Éireann stated that flow from the Tulla road pump station can vary between 4,000-5,000 m3/day.

	Answer	Condition Number	Non Compliance	Observation
Is the Pump Station designed as an Emergency Overflow (EO)?	Yes			

Comment / Action Required

1. The Ballyallia pump station was inspected. It is designed as an Emergency Overflow. This station is in place approximately twenty years. It also acts as an emergency overflow. No flow monitoring of storm water takes place at the outfall point. it was highlighted that any overflow here would likely be storm water only.

2. The Francis Street pump station also acts as an Emergency overflow. It has three foul pumps. There are four storm pumps at this station. There is no flow monitoring on what volume of combined sewer overflow is going to storm water overflow point.

		Answer	Condition Number	Non Compliance	Observation
6.3	Is there a screen at the pumping station?	Checked			

Comment / Action Required

Uisce Éireann confirmed that there are screens in situ for the main pumping stations. There are two screens at the Francis Street Pump station. It was confirmed that one of these screens was broken down and in need of repair on the day of the inspection.

Action required:

Uisce Éireann are required to revert with timeframes to repair the damaged screen at the Francis Street pump station.

7. Water Framework Directive

		Answer	Condition Number	Non Compliance	Observation
7.1	Is the agglomeration categorised as a significant pressure under the Water Framework Directive?	Yes			

Comment / Action Required

Waste water discharges from Ennis North were identified during the characterisation for the third cycle of Ireland's River Basin Management Plan as a significant pressure on the Fergus putting it at risk of not meeting its environmental objective of good status. Storm water overflows were identified as the significant pressure impacting this water body.

		Answer	Condition Number	Non Compliance	Observation
7.2	Is the significant pressure due to the plant or network/SWO or both?	Checked			

Comment / Action Required

The Ennis North network is identified as significant pressures on the Fergus river under the Water Framework Directive.

		Answer	Condition Number	Non Compliance	Observation
7.3	Are the issues that gave rise to the agglomeration been categorised as a significant pressure still ongoing?	Yes			

Comment / Action Required

During the site visit an inspection of the outfall from SW3 was conducted. It was found that access was poor. There was an old spill boom in the river (adjacent to SW3 outfall). At 13:37 there was a stormwater overflow occurred, which continued for approximately 1 minute.

Uisce Éireann should examine the feasibility of installing a flow monitor or events monitor on this outfall point at SW4 to determine the volume being discharged at this point.

		Answer	Condition Number	Non Compliance	Observation
7.4	Are corrective actions being progressed to address the significant pressure?	Yes			

Comment / Action Required

Uisce Éireann's representatives advised that a drainage area plan (DAP) to assess the waste water collecting system is underway. This DAP will inform improvements needed to the collecting system.

Action required:

Uisce Éireann are requested to revert with timeframes by which the DAP will be completed for Ennis North.

8. Site Specific Issues

		Answer	Condition Number	Non Compliance	Observation
8.1	Storm Water Overflow	Checked			

Comment / Action Required

No flow meters exist on any SWO outfalls apart from SW2 which is located at the WWTP.

Action required:

Uisce Éireann should look at the feasibility of installing a flow meter or events monitor on all SWO outfall points (even temporarily) to accurately determine volumes of untreated discharges and overflow events across the network.

		Answer	Condition Number	Non Compliance	Observation
8.2	AER reported mointoring on SWOs	Checked			

Comment / Action Required

The Licensee reported a volume of 458,391 m3 of sewage discharged via monitored SWOs in the agglomeration for 2022, in the 2022 AER. This volume is for SW2 only as no other SWOs within the agglomeration are monitored.

The table in Section 4.1.1 of the 2022 AER reported the monitoring status and reports monitoring status as ' Monitored' for TBC and SW4. Subsequent data submitted prior to the inspection reported that 'Events duration' monitoring is in place for SWO locations: TBC, SW3 and SW4. Neither of these are accurate or reflective of what was observed on the day of the visit and as pointed out by licensee representatives.

Action required:

UE are required to check what is reported in AERs and ensure that it is accurate and reflects practices on the ground. The licensee should ensure that SWO reporting in the AERs is corrected and reported accurately going forward.

		Answer	Condition Number	Non Compliance	Observation
8.3	SWOs not meeting DoEHLG Criteria	Checked			

Comment / Action Required

All Storm Water Overflows in the agglomeration are reported in the 2022 AER as not meeting DoEHLG criteria.

Action Required:

Uisce Éireann are requested to clarify what works are required at each Storm Water Overflow so that they can meet the DoEHLG criteria.

		Answer	Condition Number	Non Compliance	Observation
8.4	Control and Monitoring	Checked			

Comment / Action Required

No sign was visible at the licensed primary waste water discharge monitoring point at the WWTP on the day of the visit. Condition 4.6 of the Licence requires that the licensee clearly labels and provides safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.

Uisce Éireann are required to ensure that there is full compliance with the above mentioned Condition of the Licence.

		Answer	Condition Number	Non Compliance	Observation
8.5	Presence of pin floc in the weir of Clarifier No.1	Checked			

Comment / Action Required

During the site visit pin floc was noted flowing over the v-notch weirs of Clarifier No.1.

Action required:

Uisce Éireann are required to investigate the cause of pin floc evident in the Clarifier no. 1 and put in place necessary measures to prevent its reoccurrence.

		Answer	Condition Number	Non Compliance	Observation
8.6	MLSS and SVI data for July 2023	Checked			

Comment / Action Required

A review of the MLSS and SVI results provided following the site visit on the 18 July 2023 showed that side 1 had an elevated MLSS result of 6,464mg/l and a low SVI of 54 for 12 July 2023. Side 1 has reported fluctuations in MLSS from 8 July to 17 July that varied from 1,937mg/l on 8 July to 6,464mg/l on 12 July 2023. Both Side 1 and Side 2 have low SVI reported on 12 July and 13 July at 54 and 68 (Side 1) and 71 and 73 (side 2) respectively. These low levels potentially indicate that the activated sludge may be not as healthy.

Side 1 has reported SVI results of >200 for the period 13 May 2023 to 31 May 2023. These high SVI levels would indicate sludge bulking.

Action required:

Uisce Éireann are required to:

1. Review the desludging of the plant and ensure that it is adequately desludged at all times.

2. Investigate the cause of the low SVI and elevated MLSS in Side 1 on the 12 July 2023 and put in place necessary measures to prevent its reoccurrence.

Photographs

Photograph 1: View of Storm tank at Ennis North Waste Water Treatment Plant (D0048-01)

Photograph 2: View of Aeration basin no. 1 at Ennis North Waste Water Treatment Plant (D0048-01)

Photograph 3: View of Clarifier no. 1 at Ennis North Waste Water Treatment Plant (D0048-01)

FOLLOW-UP ACTIONS

The licensee is required to complete the actions outlined in this site visit report within the specified timeframes. Where required, the licensee shall also respond to actions specified in Compliance Investigations and/or submit a response to this site visit report via the EDEN system. The licensee shall maintain a documentary evidence, for review by the Agency, that the prescribed actions were completed within the required timeframe.

(i) Compliance Investigations

The Agency may generate a Compliance Investigation through the EDEN system and issue instructions and actions to the licensee. The licensee will receive notification when an instruction or action is issued and the licensee must respond to the actions within the Compliance Investigation within the specified timeframe.

(ii) Response to Site Visit Report

Where the licensee is requested to (or wishes to) respond to the Agency in relation to this site visit report, the licensee may select the 'Make a Response' link on the Site Visits page in EDEN where a .pdf document containing the response can be attached and submitted. The response should include details of the actions taken by the licensee to address the issues raised in this site visit report and the target completion dates. This Licensee Public Response provides the licensee with an opportunity to inform both the Agency and the public about the implementing of actions set out in the Agency site visit report. The response must be submitted **within 21 calendar days** of the issue date of this site visit report.

(iii) Publication of Reports

's site visit report will be published on the EPA's website, www.epa.ie, 30 calendar days after the site visit report issue date.

Any licensee response to this site visit report will be published on the EPA's website simultaneously (i.e. 30 calendar days after the site visit report issue date).

Please note that licensees are required to comply with the conditions of the licence at all times, and where non-compliance occurs, compliance must be restored within the shortest possible time. These actions will be verified during subsequent Agency visits. Please quote the above Inspection Reference Number in any correspondence in relation this Report.

Electronic Copy

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Clare County Council
Environment Section

8 January 2024 Reg. No.: D0048-01

Notice for the purposes of Regulation 14(5) of the European Union (Waste Water Discharge) Regulations 2007 to 2020, as amended - Review by the Agency of a licence issued to Uisce Éireann

Dear Sir/Madam

We advise, in accordance with Regulation 14(5), the Agency intends to conduct a review of waste water discharge licence, Register Number: D0048-01 for the agglomeration named Ennis North.

We will notify you again, in accordance with Regulation 21(1), when the Agency receives the application for the review of the above referenced licence. Submissions relating to the proposed review may be made in writing to the Agency at its headquarters within 5 weeks of receipt of the fee and completed application form, and the Agency shall not make a decision on the review before the expiry of the said period.

Please note that there is no requirement for you to acknowledge receipt of this notice.

Yours faithfully

Environmental Licensing Programme
Office of Environmental Sustainability
Tel: 053 – 9160600

Electronic Copy

Ken Conroy
IWLicensingSourthern
On behalf of Uisce Éireann

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

8 January 2024 Reg. No.: D0048-01

Notice for the purposes of Regulation 14(5) of the European Union (Waste Water Discharge) Regulations 2007 to 2020, as amended - Review by the Agency of a licence

Dear Sir/Madam

We advise, in accordance with Regulation 14(5), the Agency intends to conduct a review of your existing licence, Register Number: D0048-01 for the agglomeration named Ennis North.

The grounds for the review are set out in the Regulation 14(1) Examination Report https://epawebapp.epa.ie/terminalfour/wwda/wwda-view-filter.jsp?regno=D0048-01&filter=c&docfilter=go which is available on the Agency's website.

In accordance with the provisions of Regulation 14(7), you are required, for the purposes of the review of your licence, to submit within 6 months of the date of this notice via the 'review authorisation' function on the EDEN Online Portal the following:

a) A completed application form and associated templates available on the EDEN portal and
b) Fee as is appropriate having regard to the provisions of Regulation 39.

Guidance on how to make an application and completing the application form is available on the Agency's website https://www.epa.ie/publications/licensing--permitting/waste-water/waste-water-discharge-application--guidance-document.php. It should be noted that failure to comply with the above requirements is an offence.

In accordance with Regulation 14(3) the Agency will publish a notice on its website stating that the EPA is conducting a review of your licence.

In accordance with Regulation 14(7)(b) submissions relating to the proposed review may be made in writing to the Agency at its headquarters within 5 weeks of receipt of the fee and completed application form, and the Agency shall not make a decision on the review before the expiry of the said period.

If you have any further queries, please contact licensing@epa.ie.

Yours faithfully

Environmental Licensing Programme
Office of Environmental Sustainability
Tel: 053 – 9160600

Eve O'Sullivan

From: Sheelagh Flanagan <sheelaghflanagan@water.ie>
Sent: Thursday 18 July 2024 12:20
To: Licensing Staff
Subject: EPA Initiated Review - Update
Attachments: unsolicited Response Virginia .pdf; unsolicited Response Ennis North .pdf; unsolicited Response Dromcollagher Town and Environs-pdf.pdf; unsolicited Response Ballysadare.pdf; unsolicited Response Derrinturn.pdf

Dear Licensing Staff,

Please see attached update on EPA initiated Reviews for Virginia, Ennis North, Dromcollagher, Ballysdare, Derrinturn

Kind Regards

Sheelagh Flanagan
Discharge Authorisation Technical Manager

Uisce Éireann
Teach Colvill, 24-26 Sráid Thalbóid, Baile Átha Cliath 1, D01 NP86, Éire
Irish Water
Colvill House, 24-26 Talbot Street, Dublin 1, D01 NP86, Ireland

Thank you for your attention.

Uisce Éireann
Irish Water

Environmental Licensing Programme
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17/07/2024

UÉ ref: LT0758

Dear Inspector,

Re: Ennis North - Waste Water Discharge Authorisation Application

Further to Regulation 14(5) notice dated 8th January 2024 requesting UÉ to submit a licence review application within 6 months.

Uisce Éireann has engaged an Engineer Service Provides (ESP) to complete the WWDA application form and prepare the necessary supporting documentation. The ESP commenced preparation of water quality assessment to support the licence review application. UÉ wishes to advise the Agency that additional time is required to prepare and submit a complete application.

Uisce Éireann proposes to submit the completed application and supporting technical documentation Q1 2025

Yours sincerely,
Sheelagh Flanagan

Sheelagh Flanagan
Wastewater Strategy