Annual Environmental Report

2021

Ballinasloe

D0032-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0032-01, Ballinasloe, in Galway in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified reports where relevant are included as an appendix to the AER.

1.1 ANNUAL STATEMENT OF MEASURES

A summary of any improvements undertaken is provided where applicable.

There was no major capital or operational changes undertaken. Tankering of wastewater from Imhoff tank to the primary WWTP continued throughout the year. There is no discharge at the secondary discharge point.

1.2 TREATMENT SUMMARY

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

- Ballinasloe Secondary Discharge with a Plant Capacity PE of 100, the treatment type is 1 - Primary treatment
- Ballinasloe WWTP with a Plant Capacity PE of 13500, 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
TPEFF1200D0032SW002	Ballinasloe Secondary Discharge	Treated	Non-Compliant	N/A

Discharge Point Reference	Treatment Plant	Discharge Type	Compliance Status	Parameters failing if relevant
TPEFF1200D0032SW001	Ballinasloe WWTP	Treated	Non-Compliant	Ammonia-Total (as N) mg/l

1.4 LICENCE SPECIFIC REPORTING

Assessment / Report
Priority Substances Assessment

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 BALLINASLOE SECONDARY DISCHARGE - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - BALLINASLOE SECONDARY DISCHARGE

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
Total Phosphorus (as P) mg/l	9	4.30	2.59
COD-Cr mg/l	12	618	343
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	252	116
Suspended Solids mg/l	12	498	196
Hydraulic Capacity	N/A	N/A	12

If other inputs in the form of sludge / leachate are added to the WWTP then these are included in Section 2.1.5 if applicable.

Significance of Results:

The annual mean hydraulic loading is greater than the peak Treatment Plant Capacity. The annual maximum hydraulic loading is greater than the peak Treatment Plant Capacity. Further details on the plant capacity and efficiency can be found under the sectional ‘Operational Performance Summary’.

2.1.2 EFFLUENT MONITORING SUMMARY -

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
There is no Effluent data included in the AER.								

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):

There is no effluent data included in the AER to confirm an exceedance of ELV's.

Significance of Results:

The WWTP is non-compliant with the ELV's set in the Wastewater Discharge Licence. The impact of the receiving water is assessed further in Section 2.

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE

A summary of monitoring from ambient monitoring points associated with the wastewater discharge is provided in the sections below. For discharges to rivers upstream (U/S) and downstream (D/S) location data is provided. For other ambient points in lakes, coastal or transitional waters, monitoring data from the most appropriate monitoring station is selected.

The table below provides details of ambient monitoring locations and details of any designations as sensitive areas.

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Ecological Status
Downstream	185748, 231068	RS26S071300	No	No	No	No	Moderate

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

Significance of Results:

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

The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

The discharge from the wastewater treatment plant does not have an observable impact on the water quality.

The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - BALLINASLOE SECONDARY DISCHARGE

2.1.4.1 Treatment Efficiency Report - Ballinasloe Secondary Discharge

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	242736	N/A	N/A
TN	N/A	N/A	N/A
TP	2741	N/A	N/A
COD	425879	N/A	N/A
cBOD	144052	N/A	N/A

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

2.1.4.2 Treatment Capacity Report Summary - Ballinasloe Secondary Discharge

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.

Ballinasloe Secondary Discharge	
Peak Hydraulic Capacity (m³/day) - As Constructed	N/A
DWF to the Treatment Plant (m³/day)	N/A
Current Hydraulic Loading - annual max (m³/day)	N/A
Average Hydraulic loading to the Treatment Plant (m³/day)	12
Organic Capacity (PE) - As Constructed	100
Organic Capacity (PE) - Collected Load (peak week)[Note1]	70
Organic Capacity (PE) - Remaining	30
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 - BALLINASLOE SECONDARY DISCHARGE

'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.							

2.2 BALLINASLOE WWTP - TREATED DISCHARGE

2.2.1 INFLUENT MONITORING SUMMARY - BALLINASLOE 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
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	252	116
Total Phosphorus (as P) mg/l	9	4.30	2.59
COD-Cr mg/l	12	618	343
Suspended Solids mg/l	12	498	196
Hydraulic Capacity	N/A	12077	3673

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 greater than the peak Treatment Plant Capacity. Further details on the plant capacity and efficiency can be found under the sectional ‘Operational Performance Summary’.

2.2.2 EFFLUENT MONITORING SUMMARY - TPEFF1200D0032SW001

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	24	Pass
Suspended Solids mg/l	35	88	N/A	12	N/A	N/A	12	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	12	1	N/A	5.80	Pass
Ammonia-Total (as N) mg/l	2.00	2.40	N/A	12	2	2	1.02	Fail
ortho-Phosphate (as P) - unspecified mg/l	1.00	1.20	N/A	12	N/A	N/A	0.029	Pass
pH pH units	N/A	N/A	N/A	10	N/A	N/A	7.84	
Conductivity @20°C µS/cm	N/A	N/A	N/A	1	N/A	N/A	888	

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):

Inadequate operational Procedures/Training

Significance of Results:

The WWTP is non-compliant with the ELV's set in the Wastewater Discharge Licence. The impact on the receiving waters is assessed further in Section 2.

2.2.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF1200D0032SW001

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	185477, 231416	RS26S071290	No	No	No	No	Moderate
Downstream	187334, 229145	RS26S071400	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	RS26S071290	1.45	RS26S071400	1.57	1.50	8.1
Ammonia-Total (as N) mg/l	RS26S071290	0.022	RS26S071400	0.022	0.065	-0.2

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	RS26S071290	0.017	RS26S071400	0.012	0.035	-12.4
Conductivity @20°C µS/cm	RS26S071290	531	RS26S071400	N/A	N/A	
Dissolved Oxygen mg/l	RS26S071290	9.94	RS26S071400	9.07	N/A	
Temperature °C	RS26S071290	12	RS26S071400	14	N/A	
Suspended Solids mg/l	RS26S071290	4.69	RS26S071400	N/A	N/A	
pH pH units	RS26S071290	8.03	RS26S071400	8.02	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 downstream monitoring location. 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 BOD, 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.

2.2.4 OPERATIONAL PERFORMANCE SUMMARY - BALLINASLOE WWTP

2.2.4.1 Treatment Efficiency Report - Ballinasloe 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)
COD	425879	31825	93
TN	N/A	N/A	N/A
cBOD	144052	7816	95
SS	242736	16381	93
TP	2741	N/A	N/A

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

2.2.4.2 Treatment Capacity Report Summary - Ballinasloe 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.

Ballinasloe WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	10125
DWF to the Treatment Plant (m^3/day)	3375
Current Hydraulic Loading - annual max (m^3/day)	12077

Ballinasloe WWTP	
Average Hydraulic loading to the Treatment Plant (m³/day)	3673
Organic Capacity (PE) - As Constructed	13500
Organic Capacity (PE) - Collected Load (peak week)[Note1]	8624
Organic Capacity (PE) - Remaining	4876
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.

2.2.5 SLUDGE / OTHER INPUTS - BALLINASLOE 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)
Landfill Leachate (delivered by tanker)	3996	Volume (m3)	48.6	0.29	No	No	No
Landfill Leachate (delivered by sewer network)	44854	Volume (m3)	546	3.3	Yes	No	No
Waterworks Sludge	116060	Volume (m3)	1413	8.6	Yes	No	No

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)
Domestic /Septic Tank Sludge	1927	Volume (m3)	23.4	0.14	Yes	No	No
Domestic /Septic Tank Sludge	4418	Volume (m3)	53.8	0.33	Yes	No	No

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)
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	Yes
Breach of ELV	Inadequate Operational Procedures / Training	1	No	Yes
Breach of ELV	Inadequate Operational Procedures / Training	1	No	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	3
Number of Incidents reported to the EPA via EDEN in 2021	3
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
SW003	185721.14, 231057.61	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW004	185928, 230488	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW005	184064.1, 229800.86	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW006	184197.519952956, 231738.354338612	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW008	185430.6, 230936.43	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW010	186891.05, 230195.49	Yes	Low	Meeting	Unknown	Unknown	Not 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 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?	N/A
The SWO Assessment included the requirements of relevant of WWDL schedules?	Yes
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	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
D0032-SIP:01	Discontinue discharge from Imhoff Tank	C	31/12/2015	Yes	Not Started		Capital works not funded in RC3. Capital works funding post 2024 will be contingent on the project being included in the 2025-2029 investment period.
D0032-SIP:02	SW002 Secondary Discharge Point to be Discontinued	C	31/12/2015	Yes	Not Started		Capital works not funded in RC3. Capital works funding post 2024 will be contingent on the project being included in the 2025-2029 investment period.

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
D0032-IP:104	Remedial works at Dunlo Pump Station	Improved Operational Control		Pump Station has been assessed under the WWPS programme, and has been assessed by a consultant engineer and recommendations made regarding remedial works required. Timescale of works not determined yet.

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	Year included in AER	Included in this AER
Priority Substances Assessment	Yes	2015	Yes
Toxicity/Leachate Management	Yes	2017	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	Yes

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

Signed: Date: 25/04/2022

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 summary
Appendix 7.2 - Priority Substances Assessment

Ballinasloe WWTP Secondary DS 2021

			Parameter	pH	Biological Oxygen Demand	Ortho-Phosphate P	Ammonia N	Dissolved Oxygen	Suspended Solids	Temperature	Conductivity @ 20°C
			Max.	9	--	--	--	--	--	--	--
			Min.	6	--	--	--	--	--	--	--
			Test Method	--	--	--	--	--	--	--	--
Station	Sample Referenc	Sample Date	Analyst Conclu	pH units	mg/l	mg/l	mg/l	mg/l	mg/l	Degrees C	µS/cm
Ballinasloe WWTP: Downstream Secondary Discharge	193709/003	7-Jan-2021		8	< 1	0.012	0.028	11	< 5	7.5	
Ballinasloe WWTP: Downstream Secondary Discharge	195751/003	2-Mar-2021		8	1	0.01	0.008	11	6	9.9	
Ballinasloe WWTP: Downstream Secondary Discharge	199073/003	21-May-2021		8.3	1.4	0.007	0.01	11	6	12.7	
Ballinasloe WWTP: Downstream Secondary Discharge	201020/003	8-July-2021		8.3	2.2	< 0.005	0.016	8	< 5	14.6	
Ballinasloe WWTP: Downstream Secondary Discharge	966-2021-0000	14-Sep-2021		8.04	< 1	< 0.05	< 0.05	8.48	7	17.1	529
Ballinasloe WWTP: Downstream Secondary Discharge	966-2021-0000	12-Nov-2021		7.8	1.3	< 0.05	< 0.05	10.28	< 5	11	

Ambient Impact Assessment Table

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS (95%Ile)	%EQS
cBOD mg/l			RS26S071300	1.32	1.5	
Ortho-Phosphate (as P) mg/l			RS26S071300	0.02	0.035	
Ammonia (as N) mg/l			RS26S071300	0.03	0.065	
pH pH units			RS26S071300	8.07		
Dissolved Oxygen %saturation or mg/l			RS26S071300	9.96		
Suspended Solids mg/l			RS26S071300	5.67		
Temperature (degrees C)			RS26S071300	12.13		
Conductivity (@20 degrees C)			RS26S071300	529		

Confidential Report
Client: Galway County Council
Date: 19 October 2021

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Monitored Entity Name	Monitored Entity Code	Station Name	Station Code	Sample Code	Sample Date	Sampling Method	Laboratory	Env Parameter	Result	Measurement Unit	Accredited	Limit of Detection	Irish Water/EPA requirement
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Total Hardness (as CaCO3)	301	mg/l	Yes Subcontracted	Not applicable	Not applicable
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	Elab	Cyanide	< 5	µg/l	Yes Subcontracted	5	5
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	TMS	Fluoride	440	µg/l	Yes In House	10	250
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Hexachlorocyclohexane (all isomers)	< 0.0087	µg/l	Yes Subcontracted	0.0087	0.02
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Isodrin	< 0.004	µg/l	Yes Subcontracted	0.004	1
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	Elab	Copper (filtered)	< 1.8	µg/l	Yes Subcontracted	1.8	2.5
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Mercury (filtered)	< 0.010	µg/l	Yes Subcontracted	0.01	0.5
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Zinc (Filtered)	216	µg/l	Yes Subcontracted	4	4
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Benzo(a)pyrene	< 0.010	µg/l	Yes Subcontracted	0.01	0.01
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Benzo(b)fluoranthene	< 0.010	µg/l	Yes Subcontracted	0.01	0.01
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	Benzo(k)fluoranthene	< 0.010	µg/l	Yes Subcontracted	0.01	0.01
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	1,2-Dichloroethane	< 1.00	µg/l	Yes Subcontracted	1.0	Not applicable

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Confidential Report
Client: Galway County Council
Date: 19 October 2021

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Monitored Entity Name	Monitored Entity Code	Station Name	Station Code	Sample Code	Sample Date	Sampling Method	Laboratory	Env Parameter	Result	Measurement Unit	Accredited	Limit of Detection	Irish Water/EPA requirement
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	alpha-HCH - Hexachlorocyclohexane	< 0.003	µg/l	Yes Subcontracted	0.003	Not applicable
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	beta-HCH - Hexachlorocyclohexane	< 0.003	µg/l	Yes Subcontracted	0.003	Not applicable
Ballinasloe	D0032	Ballinasloe Wastewater Treatment Plant Eff SW001	TPEFF1200D0032SW001	28933-1	31/08/2021	Composite	ALS	gamma-HCH - Hexachlorocyclohexane	< 0.0027	µg/l	Yes Subcontracted	0.0027	Not applicable

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