

Annual Environmental Report

2023



Avoca

D0411-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2023 AER

This Annual Environmental Report has been prepared for D0411-01, Avoca, in Wicklow 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

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

1.3 ELV OVERVIEW

The overall compliance of the final effluent with the Emission Limit Values (ELVs) is shown below. More detailed information on the below ELV's can be found in Section 2.

Discharge Point Reference	Treatment Plant	Discharge Type	Compliance Status	Parameters failing if relevant
TPEFF3400D0411SW001	Avoca WWTP	Untreated	Non-Compliant	Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l COD-Cr mg/l ortho-Phosphate (as P) - unspecified mg/l Suspended Solids 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

2.1.1 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)
COD-Cr mg/l	125	250	N/A	6	6	3	N/A	Fail
Suspended Solids mg/l	35	88	N/A	6	6	3	N/A	Fail
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	6	6	5	N/A	Fail
pH pH units	6.00	9.00	N/A	6	N/A	N/A	N/A	Pass
Ammonia-Total (as N) mg/l	5.00	6.00	N/A	6	5	5	N/A	Fail
ortho-Phosphate (as P) - unspecified mg/l	5.00	6.00	N/A	6	2	1	N/A	Fail

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):

WWTP upgrade required to meet ELVs.

Significance of Results:

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

2.1.2 AMBIENT MONITORING SUMMARY FOR THE UNTREATED DISCHARGE TPEFF3400D0411SW001

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	320367, 179913	RS10A030700	No	No	No	No	Poor
Downstream	319302, 177214	RS10A030800	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.

Based on ambient monitoring results a deterioration in Ortho-P concentration downstream of the effluent discharge is noted.

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

Based on the effluent compliance results and the lack of treatment, the discharge from the wastewater treatment plant may be having an observable negative impact on the Water Framework Directive status. However, it should be noted that the status is Poor upstream and Moderate downstream of the primary discharge.

It should be noted that the receiving water, the Avoca River is seriously polluted largely as a result of copper mining (now ceased) in the Avoca Valley upstream of the Primary Discharge.

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 Irish Water but may not be reportable under our licence for example where the incident does not have an impact on environmental performance.

A summary of reported incidents is included below.

3.2.1 SUMMARY OF INCIDENTS

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Breach of ELV	WWTP upgrade required to meet ELV	1	Yes	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2023	1
Number of Incidents reported to the EPA via EDEN in 2023	1
Explanation of any discrepancies between the two numbers above	N/A

4 INFRASTRUCTURAL ASSESSMENTS AND PROGRAMME OF IMPROVEMENTS

4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT

A summary of the operation of the storm water overflows and their significance where known is included below:

4.1.1 SWO IDENTIFICATION

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2023 (No. of events)	Total volume discharged in 2023 (m ³)	Monitoring Status
SW2	320384,179386	Yes	Low Significance	Not Meeting Criteria	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 monitored SWOs in the agglomeration in the year (m ³)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	Yes
The SWO Assessment included the requirements of relevant of WWDL schedules?	Yes
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	N/A

4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS

4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NAY)	Status of Works	Timeframe for Completing the Work	Comments
D0411-SIP:01	Upgrade Avoca WWTP to provide secondary treatment in order to meet the emission limit values specified in Schedule A.1 of this licence.	C	31/12/2019	Yes	At Planning Stage	31/12/2025	

A summary of the status of any other improvements identified by under Condition 5 assessments- is included below.

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description / or any Operational Improvements	Improvement Source	Expected Completion Date	Comments
No additional improvements planned at this time.				

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

N/A

5 LICENCE SPECIFIC REPORTS

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Licence Specific Report	Required by licence	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?	Yes
List reason e.g. additional SWO identified	EPA Initiated Review
Is there a need to request/advise the EPA of any modification to the existing WWDL with respect to condition 4 changes to monitoring location, frequency etc	N/A
List reason e.g. changes to monitoring requirements	N/A
Have these processes commenced?	Yes
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:

Date: 27/02/2024

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

Appendix

Appendix 7.1 - Ambient Monitoring Summary

Avoca 2023 Ambient Monitoring Summary

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish National Grid Reference (Easting, Northing)	EPA Feature Coding Tool code	Receiving Waters Designation (Yes/No)			
			Bathing Water	Drinking Water	FWPM	Shellfish
Upstream Monitoring Point	320367, 179913	RS10A030700	No	No	No	No
Downstream Monitoring Point	319302, 177214	RS10A030800	No	No	No	No

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Current WFD Status	cBOD (Mean mg/l)	o-Phosphate (as P) (Mean mg/l)	Ammonia (as N) (mean mg/l)
Upstream Monitoring Point	Poor	1.225	0.0230	0.035
Downstream Monitoring Point	Moderate	1.125	0.0240	0.035
<i>Difference</i>		<i>-0.100</i>	<i>0.0010</i>	<i>0.000</i>
EQS		1.500	0.035	0.065
% of EQS		-6.667%	2.857%	0.000%

Avoca 2023 Ambient Monitoring Data

Station	Sample Date	BOD	Nitrite N	Ortho P	Ammonia	pH	DO %	DO	Temp	Conductivity
		mg/l	mg/l	mg/l	mg/l	pH Units	&Sat	mg/l	Deg C	µS/cm
Upstream	10-Jan-2023	2.1	0.012	0.023	0.04	6.8	102	12.2	7.8	80
Upstream	4-Apr-2023	1.2	< 0.005	< 0.01	0.03	6.6	106	12.6	7.9	73
Upstream	1-Aug-2023	0.8	0.008	< 0.01	0.04	6.6	101	10.1	15.4	24
Upstream	10-Oct-2023	0.8	< 0.005	< 0.01	0.03	6.3	99	10.3	13.4	86
	Mean	1.367	0.010	0.023	0.037	6.667	103.000	11.633	10.367	59.000
	95%ile	1.965	0.012	0.023	0.040	6.770	105.400	12.540	15.100	85.100
Downstream	10-Jan-2023	1.9	0.013	0.024	0.04	7	103	12	8.8	92
Downstream	4-Apr-2023	0.9	< 0.005	< 0.01	0.02	6.7	106	12.5	8.1	78
Downstream	1-Aug-2023	0.9	0.008	< 0.01	0.04	7	100	10	15.5	26
Downstream	10-Oct-2023	0.8	< 0.005	< 0.01	0.04	6.6	99	10.4	13.4	93
	Mean	1.125	0.011	0.024	0.035	6.825	102.000	11.225	11.450	72.250
	95%ile	1.750	0.013	0.024	0.040	7.000	105.550	12.425	15.185	92.850

Note: Where the concentration in the result is less than the limit of detection (LOD), a value of $LOD/\sqrt{2}$ was used in calculating the mean and 95%ile concentrations.