

Annual Environmental Report

2018



Newport

D0224-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2018 AER

This Annual Environmental Report has been prepared for D0224-01, Newport, in Mayo 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 TREATMENT SUMMARY

The agglomeration is not currently served by a wastewater treatment plant. Two holding tanks are located in the agglomeration which hold wastewater prior to discharge.

1.1.1 NEWPORT (MAYO) UNTREATED AGGLOMERATION

Treatment type	Yes / No	Details
Preliminary Treatment	No	
Primary Treatment	No	
Secondary Treatment	No	
Nutrient Removal	No	
Tertiary Treatment	No	

1.2 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
TPEFF2200D0224SW001	Newport (Mayo)	Untreated	Non-Compliant	
TPEFF2200D0224SW001	Newport (Mayo)	Untreated	Non-Compliant	

1.3 LICENCE SPECIFIC REPORTING INCLUDED IN AER

Assessment / Report	Included in AER
There is no Licence Specific Reports included in the AER.	

2 TREATMENT PLANT PERFORMAND AND IMPACT SUMMARY

2.1 NEWPORT (MAYO) UNTREATED AGGLOMERATION

2.1.1 INFLUENT MONITORING SUMMARY - NEWPORT (MAYO) SEPTIC TANK 1

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
There is no Influent data included in the AER.			

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

There are three sampling points in the agglomeration. Two sampling locations are located after one of the holding tanks while the third sampling location is located after the second holding tank. The results for each sampling location is shown in **Appendix 7.1**.

As this is an untreated agglomeration it therefore is non-compliant.

Cause of Exceedance(s):

No treatment provided.

Significance of Results:

The agglomeration is non-compliant with the ELV's set in the Wastewater Discharge Licence.

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	Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
Upstream	99510, 294141	TPEFF2200D0224SW001	No	No	No	No	High
Downstream	97561, 294086	TPEFF2200D0224SW001	No	No	No	No	High
Downstream	96139, 293892	TPEFF2200D0224SW001	No	No	No	No	High

The results for ambient results and / or additional monitoring data sets are included in the **Appendix 7.2**.

Significance of Results:

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

The ambient monitoring results did not meet the required EQS.

The parameters which exceeded the EQS and may be causing an impact are: BOD and Ammonia.

A deterioration in the water quality has been identified but it is not known if it is caused by the discharge from the WWTP.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY

2.1.4.1 Treatment Efficiency Report

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)	Comment
cBOD		4016.56		
TP				
SS		4747.61		
TN				
COD		39036.75		

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

2.1.4.2 Treatment Capacity Report Summary

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.

Newport (Mayo) Septic Tank 1	
Peak Hydraulic Capacity (m3/day) - As Constructed	
DWF to the Treatment Plant (m3/day)	
Current Hydraulic Loading - annual max (m3/day)	250

Average Hydraulic loading to the Treatment Plant (m3/day)	150
Organic Capacity (PE) - As Constructed	
Organic Capacity (PE) - Collected Load (peak week)	1470
Organic Capacity (PE) - Remaining	0
Will the capacity be exceeded in the next three years? (Yes/No)	Yes

2.1.5 SLUDGE / OTHER INPUTS

'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.							

2.1.6 SLUDGE REMOVAL

The amount of sludge removed from the wastewater treatment plant is shown below along with the transported destination of the sludge from the treatment plant.

Treatment Plant	Sludge type	Quantity	Unit	% Dry Solids	Destination
There is no Sludge data included in the AER.					

3 COMPLAINTS AND INCIDENTS

3.1 COMPLAINTS SUMMARY

A summary of complaints of an environmental nature is included below.

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
1	Water Pollution	0	1

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)
There is no Incident data included in the AER.				

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2018	0
Number of Incidents reported to the EPA via EDEN in 2018	0
Explanation of any discrepancies between the two numbers above	

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	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2018 (No. of events)	Total volume discharged in 2018 (m3)	Monitoring Status
SW005	098189, 293723	Yes	Low	Meeting			Not Monitored
SW006	098363, 293887	Yes	Low	Meeting			Not Monitored
SW007	099234, 293998	Yes	Low	Meeting			Not Monitored

SWO Summary	
How much sewage was discharged via SWOs in the agglomeration in the year (m3)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	Yes
The SWO Assessment included the requirements of relevant of WWDL schedules?	Yes

Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	No
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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 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
D0224-SIP:01	Improvement works to increase the organic and hydraulic treatment capacity of the plant to ensure compliance with Condition 1.7 of this licence.	C	31/12/2018	Yes	Not Started	31/12/2023	

A summary of the status of any improvements identified by under Condition 5.2 is included below.

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description	Improvement Source	Expected Completion Date	Comments
There are no Improvements Programme for this Agglomeration.				

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 Table.

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 list of the various reports required for this agglomeration and a brief summary of their recommendations.

5.a Licence Specific Reports Summary Table

Licence Specific Report	Required by licence	Year included in AER	Included in this AER	Reference to relevant section of 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	
Is there a need to request/advise the EPA of any modifications to the existing WWDL?	No
List reason e.g. changes to monitoring requirements	
Have these processes commenced?	
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: 04/06/2019

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 ,

Eleanor Roche

Acting Head of Environmental Regulation.

7 APPENDIX

Appendix

Appendix 7.1 – Effluent Sampling Results

Newport Effluent Results 2018

Front of Quay									
		Suspended Solids	TON as N	Ammonia as N	cBOD	E. coli	Enterococci	Faecal Coliforms	COD
	Unit	mg/l	mg/l	mg/l	mg/l	cfu/100ml	cfu/100ml	cfu/100ml	mg/l
Date									
02/01/2018		52	<0.1	5.74	153	22000	150	<1	
08/03/2018		13	<0.1	5.3	35	252000	300	252000	
03/05/2018		42	<0.1	12.5	45	600	45000	600	
19/07/2018		98	<0.69	64	242.1	18720000	51000	19100000	525
16/08/2018		830	<0.69	0.84	28.9	1413600	30100	1820000	
29/11/2018		38	1.3	4.3	24.6	9804000	12600	10100000	
04/12/2018		34	<0.69	6.6	72.4	1046200	4600	1120000	

Back of Quay									
		Suspended Solids	TON as N	Ammonia as N	cBOD	E. coli	Enterococci	Faecal Coliforms	COD
	Unit	mg/l	mg/l	mg/l	mg/l	cfu/100ml	cfu/100ml	cfu/100ml	mg/l
Date									
02/01/2018		33	0.146	4.63	35	370000	700	<1	
08/03/2018		37	<0.1	9.63	30	320000	2800	380000	
03/05/2018		18	<0.1	4.26	32	430000	520000	430000	
19/07/2018		71	<0.69	20	127.9	1483000	15300	1900000	772
16/08/2018		67	<0.69	0.28	98.3	2603000	21000	3100000	
29/11/2018		15	1.1	4.4	25.3	19863	8400	20100	
04/12/2018		28	0.73	4.3	19.7	155310	120	191000	

Sandymount Quay									
		Suspended Solids	TON as N	Ammonia as N	cBOD	E. coli	Enterococci	Faecal Coliforms	COD
	Unit	mg/l	mg/l	mg/l	mg/l	cfu/100ml	cfu/100ml	cfu/100ml	mg/l
Date									
02/01/2019		21	0.139	6.46	31	440000	35000	<1	
08/03/2018		83	<0.1	1.58	<16	75000	78	75000	
03/05/2018		49	<0.1	30.1	140	192000	39000	192000	
19/07/2018		180	<0.69	60	283.4	3410000	144000	4800000	842
16/08/2018		27	<0.69	0.83	49.5	1986300	22400	2030000	
29/11/2018		30	1.2	1.4	19.1	4611000	100	5100000	
04/12/2018		55	<0.69	8.3	40.4	3725	960	4000	

Appendix

Appendix 7.2 - Ambient monitoring results

Ambient Monitoring Results 2018

Newport Upstream

Date	SS (mg/l)	TON (mg/l)	Salinity (ppt)	DO	NH4-N (mg/l)	E. Coli (cfu/100ml)	Enterococci (cfu/100ml)	Faecal Coliforms (cfu/100ml)	BOD (mg/l)	Conductivity
02/01/18	<2	0.243	<14	102%	0.013	100	2	<1		
08/03/18	2	<0.1	<1	97%	0.019	350	0	350		
03/05/18	2	<0.1	<1	99%	<0.005	90	7	90		
19/07/18	<5	<0.15	<1	12 mg/l	0.329	3450	1400	6500		125
16/08/18	<5	<0.15		10 mg/l	<0.005	387	48	410	1.4	
29/11/18	9	0.19		11 mg/l	0.016	60	15	66	2.7	
04/12/18	19	0.16		11 mg/l	0.031	10	20	30	1.7	

Newport Downstream 1

Date	SS (mg/l)	TON (mg/l)	Salinity (ppt)	DO	NH4-N (mg/l)	E. Coli (cfu/100ml)	Enterococci (cfu/100ml)	Faecal Coliforms (cfu/100ml)	BOD (mg/l)	Conductivity
02/01/18	1129	0.076	14.2	104%	0.047	180	220	<1		
08/03/18	2	0.045	16.2	100%	0.01	160	41	160		
03/05/18	<2	0.08	2.6	98%	0.03	28,000	26,000	28000		
19/07/18	9	<0.15	32.9	11 mg/l	0.358	0	80	<1		46500
16/08/18	31	<0.15		9mg/l	0.105	10462	164	11200	5.2	
29/11/18	19	0.27		10 mg/l	0.022	756	224	810	1.7	
04/12/18	32	0.62		11 mg/l	0.024	3873	370	4100	1.8	

Newport Downstream 2

Date	SS (mg/l)	TON (mg/l)	Salinity (ppt)	DO	NH4-N (mg/l)	E. Coli (cfu/100ml)	Enterococci (cfu/100ml)	Faecal Coliforms (cfu/100ml)	BOD (mg/l)	Conductivity
02/01/18	19	0.119	<1	97.3%	0.018	320	5	<1		
08/03/18	12	0.11	1.9	97%	0.012	250	17	250		
03/05/18	16	0.015	21.3	98%	<0.1	0	17	<1		
19/07/18	5	<0.15	16.8	10 mg/l	0.498	310	1400	1700		25110
16/08/18	166	<0.15		11 mg/l	0.382	24	51	79	1.1	
29/11/18	58	0.17		10 mg/l	0.459	816	136	920	4.7	
04/12/18	57	0.28		11 mg/l	0.021	231	100	410	5.8	

Appendix

Appendix 7.3 - 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)				Current WFD Status	Mean (mg/l)		
			Bathing Water	Drinking Water	FWPM	Shellfish		cBOD	o-Phosphate (as P)	Ammonia (as N)
Upstream Monitoring Point	99510, 294141	IE_WE_32N010190					Unknown	1.930		0.059
Downstream Monitoring Point 1	99539, 293892	IE_WE_350_0200	No	No	No	No	High	2.900		0.085
<i>Difference</i>								0.970	0.000	0.026
EQS								2.200	0.045	0.090
% of EQS								44.091%	0.000%	28.889%

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)				Current WFD Status	Mean (mg/l)		
			Bathing Water	Drinking Water	FWPM	Shellfish		cBOD	o-Phosphate (as P)	Ammonia (as N)
Upstream Monitoring Point										
Downstream Monitoring Point 2	99561, 294086	IE_WE_350_0200	No	No	No	No	High	3.870		0.205
<i>Difference</i>								3.870	0.000	0.205
EQS								2.200	0.045	0.090
% of EQS								175.909%	0.000%	227.778%