

Annual Environmental Report 2017

Agglomeration Name:	Ballyvaughan
Licence Register No.	D0327-01



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Section 1. Executive Summary and Introduction to the 2017 AER

1.1 Executive Summary

This Annual Environmental Report has been prepared for D0327-01, Ballyvaughan, in County Clare in accordance with the requirements of the wastewater discharge licence for the agglomeration as granted on 5th November 2014. There are no specific reports included in this AER.

There is no wastewater treatment plant serving the agglomeration.

Foul sewers convey wastewater to a holding tank at Ballyvaughan Quay which was constructed in 1930's and which provides primary settlement only before discharging to the coastal water of Ballyvaughan Bay. The current wastewater treatment system in Ballyvaughan does not comply with Urban Waste Water Regulations. The existing population equivalent served by the wastewater works is 1,500.

The final effluent from the Primary Discharge Point could not be assessed in relation to Emission Limit Values in 2017.

No sludge was removed as there is no WWTP serving the agglomeration

No major capital works or operational changes were undertaken 2017

Ballyvaughan agglomeration is included in Irish Waters CIP 2017-2021 as one of 5 untreated agglomerations in the County in 2015. The project is currently at the Pre-Planning Stage and will be constructed by 2021.

An Annual Statement of Measures is included in **Appendix 7.1**.

Section 2. Monitoring Reports Summary

2.1 Summary report on monthly influent monitoring

Table 2.1 - Influent Monitoring Summary

No testing of the influent is undertaken as there is no wastewater treatment plant serving the agglomeration.

2.2 Discharges from the agglomeration

Table 2.2 - Effluent Monitoring Summary

	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	Total P (mg/l)	Total N (mg/l)	Other Parameters specified in the WWDL	Comment
WWDL ELV (<i>Schedule A</i>)	20	N/A	50	N/A	10	N/A	
ELV with Condition 2 Interpretation included	40	N/A	125	N/A	12	N/A	
<i>Interim</i> % reduction from influent concentration	20%		50%	10%			
% reduction with Condition 2 Interpretation included	10%		18.75%	8%			
Number of sample results	0	0	0	0	0		
Number of sample results above WWDL ELV/not achieving min % reduction	N/A	N/A	N/A	N/A	N/A		
Number of sample results above ELV with Condition 2 Interpretation included	N/A	N/A	N/A	N/A	N/A		
Annual Mean (for parameters where a mean ELV applies)	N/A	N/A	N/A	N/A	N/A		
Overall Compliance (Pass/Fail)	Unknown	Unknown	Unknown	Unknown	Unknown		

No monitoring was undertaken as there is no WWTP.

2.3 Ambient monitoring summary

Table 2.3 - Ambient Monitoring Report Summary

Ambient Monitoring Point from	Irish Grid Reference	EPA Feature Coding Tool code	Receiving Waters Designation(Y/N)				WFD Status	Does assessment of the ambient monitoring results indicate that the discharge is
			Bathing Water	Drinking Water	FWPM	Shellfish		

WWDL (or as agreed with EPA)								impacting on water quality?
monitoring point East	E123,183 N208,555	IE_WE_110_0000	n/a	n/a	n/a	Y	Unassigned	N/A
monitoring point West	E122,459 N208,554	IE_WE_110_0000	n/a	n/a	n/a	Y	Unassigned	No-cBOD is within the limits of the EQS for both monitoring locations. No Ortho-phosphate sampling undertaken. Ammonia not applicable to coastal waterbodies.

Table 2.3.2 - Ambient Impact Assessment Table **

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Current WFD Status	cBOD	Ammonia	Total Oxidised Nitrogen mg N/l
Ambient Monitoring Point 1, East Pier, Ballyvaughan**		1	0.012	0.0107
Ambient Monitoring Point 2, West Pier, Ballyvaughan**		1	0.750	0.04

** Ambient monitoring is carried out in the bay, therefore the difference between Upstream and Downstream Monitoring Points is not relevant. For full summary of Ambient Monitoring Results, see Appendix 7.2

Significance of Results

The compliance of the WWTP with the ELV's set in the wastewater discharge licence could not be assessed as no monitoring data was available.

No EQS is applicable for cBOD, Ammonia & TON for Coastal waterbodies within the Surface Waters Regulations (S.I. No. 272 of 2009) as amended.

2.4 Pollutant Release and Transfer Register (PRTR) - report for previous year

A PRTR is not required for this agglomeration.

Section 3 Operational Reports Summary

3.1 Treatment Efficiency Report

There is currently no treatment for the Ballyvaughan agglomeration.

Table 3.1 - Treatment Efficiency Report Summary

	cBOD (kg/yr)	COD (kg/yr)	SS (kg/yr)	Total P (kg/yr)	Total N (kg/yr)	Comment
Influent mass loading (kg/year)	Unknown	Unknown	Unknown	Unknown	Unknown	No monitoring carried out
Effluent mass emission (kg/year)	Unknown	Unknown	Unknown	Unknown	Unknown	No monitoring carried out
% Efficiency (% reduction of influent load)	Unknown	Unknown	Unknown	Unknown	Unknown	

3.2 Treatment Capacity Report

Table 3.2 - Treatment Capacity Report Summary

Hydraulic Capacity – Design / As Constructed (dry weather flow) (m3/year)	33215 *
Hydraulic Capacity – Design / As Constructed (peak flow) (m3/year)	220,095 **
Hydraulic Capacity – Current loading (m3/year)	unknown
Hydraulic Capacity – Remaining (m3/year)	unknown
Organic Capacity - Design / As Constructed (PE)	Estimated at 1500
Organic Capacity - Current loading (PE)	964
Organic Capacity – Remaining (PE)	Unknown
Will the capacity be exceeded in the next three years? (Yes / No)	Yes

Reference: *Untreated Agglomerations Study Design Report, Ballyvaughan, County Clare*
by Aecom Ltd, Jennings O’Donovan Consulting Engineers Ltd.

* taken from **Table 2.2: Existing Design Flow Figures, Untreated Agglomerations Study Design Report, Ballyvaughan, County Clare**, Aecom Ltd, Jennings O’Donovan Consulting Engineers Ltd. (Winter DWF)

** taken from **Table 2.2: Existing Design Flow Figures, Untreated Agglomerations Study Design Report, Ballyvaughan, County Clare**, Aecom Ltd, Jennings O’Donovan Consulting Engineers Ltd. (Summer DWF)

3.3 Extent of Agglomeration Summary Report

In this section Irish Water is required to report on the amount of urban waste water generated within the agglomeration. It does not include any waste water collected and treated in a private system and discharged to water under a Section 4 Licence issued under the Water Pollution Acts 1977 (as amended):

Table 3.3 - Extent of Agglomeration Summary Report

	% of p.e. load generated in the agglomeration
Load generated in the agglomeration that is collected in the sewer network	100%
Load collected in the agglomeration that enters treatment plant	0%
Load collected in the sewer network but discharged without treatment	100%

Load generated in the agglomeration that is collected in the sewer network is the total load generated and collected in the municipal network within the boundary of the agglomeration.

Load collected in the agglomerations that enters treatment plant is that portion of the previous figure which enters the waste water treatment plant

Load collected but discharged without treatment is that portion of the first figure which is discharged without treatment.

3.4 Complaints Summary

There were two complaints in 2017. See table below.

Table 3.4 - Complaints Summary Table:

Number of Complaints	Date & Time	Nature of Complaint	Number Open Complaints	Number Closed Complaints
1	07/04/2017, 10:47	Sewage leaking from mains L.A. have investigated.	0	1 Closed on 12/04/2017 at 14:28
1	16/05/2017, 09:38	Sewage leaking from manhole on public road L.A. have investigated.	0	1 Closed on 17/05/2017 at 11:39

3.5 Reported Incidents Summary

There was no incident in relation to this Licence for 2017

Table 3.5.1 - Summary of Incidents

Incident Type (e.g. Non-compliance, Emission, spillage, Emergency Overflow Activation)	Incident Description	Cause	No. of incidents	Corrective Action	Authorities Contacted Note 1	Reported to EPA (Yes/No)	Closed (Y/N)
None							

Note 1: For shellfish waters notify the Marine Institute (MI) Sea Fisheries Protection Authority (SFPA) Food Safety Authority (FSAI) and An Bord Iascaigh Mhara (BIM). This should also include any other authorities that should be contacted arising from the findings of any Licence Specific Reports also e.g. Drinking Water Abstraction Impact Risk Assessment, Fresh Water Pearl Mussel Impact Assessments etc.

Table 3.5.2 - Summary of Overall Incidents

Number of Incidents in 2017	0
Number of Incidents reported to the EPA via EDEN in 2017	0
Explanation of any discrepancies between the two numbers above	

3.6 Sludge / Other inputs to the WWTP

There are no known imports to the Ballyvaughan agglomeration as there is no WWTP.

Table 3.6 - Other Inputs¹

Input type	m3/year	PE per year	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP? (Y/N)	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Domestic /Septic Tank Sludge	0	0		N	N	N
Industrial / Commercial Sludge	0	0		N	N	N
Landfill Leachate (delivered by tanker)	0	0		N	N	N
Landfill Leachate (delivered by sewer network)	0	0		N	N	N
Other (specify)	0	0		N	N	N

Notes:

- Other Inputs include; septic tank sludge, industrial /commercial sludge, landfill leachate and any other sludge that is collected and added to the treatment plant.

Section 4. Infrastructural Assessments and Programme of Improvements

4.1 Storm water overflow identification and inspection report

There are no Storm Water Overflows identified with this agglomeration, as per Schedule A3 of the Licence.

Table 4.1.1 - SWO Identification and Inspection Summary Report

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow (High / Medium / Low)	Compliance with DoEHLG Criteria	No. of times activated in 2017 (No. of events)	Total volume discharged in 2017(m3)	Total volume discharged in 2017(P.E.)	Estimated /Measured data
None								

Table 4.1.2 - SWO Identification and Inspection Summary Report

How much sewage was discharged via SWOs in the agglomeration in the year (m3/yr)?	unknown
How much sewage was discharged via SWOs in the agglomeration in the year (p.e.)?	unknown
What % of the total volume of sewage generated in the agglomeration was discharged via SWOs in the agglomeration in 2017?	unknown
Is each SWO identified as non-compliant with DoEHLG Guidance included in the Programme of Improvements?	N/A
The SWO assessment includes the requirements of Schedule A3 & C3	N/A
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.

Table 4.2.1 - Specified Improvement Programme Summary

Specified Improvement Programmes (under Schedule A and C of WWDL)	Licence Schedule (A or C)	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works ((i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning Phase; (v) Completed; (vi) Delayed;)	% Construction Work Completed	Timeframe for Completing the Work	Comments
Upgrade the wastewater works to provide primary treatment	C	31/12/2015	Y	Pre- Planning Stage	0%	2021	Included in Irish Water Capital Investment Plan 2017-2021

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

Table 4.2.2 - Improvement Programme Summary

Improvement Identifier	Improvement Description	Improvement Source	Progress (% completed)	Expected Completion Date	Comments
N/A	N/A	WWTP assessment (Condition 5.2).	N/A	N/A	
N/A	N/A	Sewer Integrity Tool (Condition 5.2).	N/A	N/A	
N/A	N/A	Secondary discharges assessment (Condition 5.2).	N/A	N/A	
N/A	N/A	SWO assessment (Condition 4 & 5.2).	N/A	N/A	
N/A	N/A	Drinking Water Abstraction Risk Assessment (Condition 4)	N/A	N/A	
N/A	N/A	Shellfish Impact Risk Assessment (Condition 5)	N/A	N/A	
N/A	N/A	Pearl Mussel Impact Assessment (Condition 4)	N/A	N/A	
N/A	N/A	Improved Operational Control	N/A	N/A	
N/A	N/A	Incident Reduction	N/A	N/A	
N/A	N/A	Elimination/Reduction of Priority Substances	N/A	N/A	

Table 4.2.3 - Sewer Integrity Risk Assessment Tool Summary

Sewer Integrity Risk Assessment Tool was carried out as part of the 2014 AER with the results as show below.

The Improvement Programme should include an assessment of the integrity of the existing wastewater works for the following:	Risk Assessment Rating (High, Medium, Low)	Risk Assessment Score	Comment
Hydraulic Risk Assessment Score	High	130	
Environmental Risk Assessment Score	Low	65	
Structural Risk Assessment Score	High	150	
Operation & Maintenance Risk Assessment Score	High	200	

Section 5. Licence Specific Reports

Licence Specific Reports Summary Table

Licence Specific Report	Required in AER or outstanding from previous AER	Report Included in AER	Reference to relevant section of AER (e.g. Appendix 2 Section 4).
Priority Substances Assessment	Yes	Yes	Appendix 7.3
Drinking Water Abstraction Point Risk Assessment	No	No	
Habitats Impact Assessment	No	No	
Shellfish Impact Assessment	Yes	No	Completed 2015
Pearl Mussel Report	No	No	
Toxicity/Leachate Management	No	No	
Toxicity of Final Effluent Report	No	No	

Licence Specific Reports Summary of Findings

Licence Specific Report	Recommendations in Report	Summary of Recommendations in Report
Priority Substances Assessment	Yes	It is considered that further sampling or analysis is not required
Drinking Water Abstraction Point Risk Assessment	No	N/A
Habitats Impact Assessment	No	N/A
Shellfish Impact Assessment	Yes (2015 report)	It is recommended that the municipal waste water discharge is given consideration in any revision of the Pollution Reduction Programme and the Characterisation report for Ballyvaughan/Poul-na-clough and Aughinish Bays.
Pearl Mussel Report	No	N/A
Toxicity/Leachate Management	No	N/A
Toxicity of Final Effluent Report	No	N/A

5.1 Priority Substances Assessment

A Priority Substances Assessment report is not required for this Licence.

Table 5.1 - Priority Substance Assessment Summary

	<i>Licensee self- assessment checks to determine whether all relevant information is included in the Assessment.</i>
Does the assessment use the Desk Top Study Method or Screening Analysis to determine if the discharge contains the parameters in Appendix 1 of the EPA guidance	Desk Top Study
Does the assessment include a review of Trade inputs to the works?	Yes
Does the assessment include a review of other inputs to the works?	Yes
Does the report include an assessment of the significance of the results where a listed material is present in the discharge? (e.g. impact on the relevant EQS standard for the receiving water)	Yes
Does the assessment identify that priority substances may be impacting the receiving water?	No
Does the Improvement Programme for the agglomeration include the elimination / reduction of all priority substances identified as having an impact on receiving water quality?	No

5.2 Shellfish Impact Assessment Report.

The Shellfish Impact Assessment Report was submitted to the EPA in 2015. A summary of the findings of this report is included below. No amendments were made in 2017.

Table 5.2 - Preferred format for Shellfish Impact Assessment Summary

Is a Shellfish Impact assessment required in the AER (or outstanding from a previous AER)?	No (2015 AER)
List prescribed organisations consulted when preparing the assessment (BIM, SFPA, MI)	SFPA
Does the assessment consider the impact of all discharges from the works?	No
Does the assessment identify that any of the discharges from the works are impacting on the microbiological quality of the shellfish?	No
Does the assessment recommend that there is a requirement to install UV/other disinfection equipment on any of the discharges?	N/A
Provide details on disinfection system to be employed	N/A
Has this been completed?	N/A
If not yet complete what is the expected date for completion?	N/A
Where disinfection is required, is there a programme in place to demonstrate the efficiency of any disinfection system in place?	N/A
What is the demonstrated efficiency of the disinfection system?	N/A
Is there a shellfish monitoring programme in place?	N/A

Does the shellfish or shellfish water monitoring programme include results generated by other organisations	N/A
List organisations contributing data to the assessment	N/A
Does the Improvement Programme for the agglomeration include the findings and recommendations of the shellfish impact risk assessment?	Yes

Section 6. Certification and Sign Off

Table 6.1 - Summary of AER Contents

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 (<i>insert lines as required</i>)	N/A
Is there a need to request/advise the EPA of any modifications to the existing WWDL? Refer to Condition 1.7 (changes to works/discharges) & Condition 4 (changes to monitoring location, frequency etc.)	N/A
List reason e.g. failure to complete specified works within dates specified in the licence, changes to monitoring requirements (<i>insert lines as required</i>)	N/A
Have these processes commenced? (i.e. Request for Technical Amendment / Licence Review / Change Request)	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER?	N/A
List outstanding reports (<i>insert lines as required</i>)	

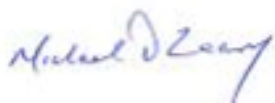
Declaration by Irish Water

The AER contains the following;

- Introduction and background to AER
- Monitoring reports summary.
- Operational reports summary.
- Infrastructural Assessment and Programme of Improvements.
- Licence specific reports.
- Certification and Sign Off
- Appendices

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

Signed:



Date: 28/02/2018

Michael O'Leary,
Acting Head of Environmental Regulation

Section 7. Appendix

Appendix 7.1- Annual statement of measures

Appendix 7.1

Annual statement of measures

Ballyvaughan agglomeration is included in Irish Waters CIP 2017-2021 as one of 5 untreated agglomerations in the County in 2015. The project is currently at the Pre-Planning Stage and is expected to be constructed by 2021.

Appendix 7.2

Appendix 7.2- Ambient monitoring summary

Ballyvaughan East Pier

Station Name	Sample Date	BOD	pH	Ammonia	Suspended Solids	Total Oxidised Nitrogen N	E Coli	Enterococci	Faecal Coliforms
		mg/l	units	mg/l					
aSW1u	29-Mar-2017	2	8	0.019	5	0.177	5	4	0.5
aSW1u	24-May-2017	0.5	8.1	0.01	4	0.011			
aSW1u	27-Sep-2017	0.5	7.9	0.005	2	0.041	38	6	0.5
aSW1u	30-11-2017	1	7.5	0.014	11	0.199			
						0.428			
Average		1	7.9	0.012		0.107			
95%tile		1.85	8.09	0.018		0.382			
Status		H							

Ballyvaughan West Pier

Station Name	Sample Date	BOD	pH	Ammonia	Suspended Solids	Total Oxidised Nitrogen N	E Coli	Enterococci	Faecal Coliforms
		mg/l	units	mg/l					
aSW1d	29-Mar-2017	0.5	8	0.013	20	0.091	0.5	0.5	0.5
aSW1d	24-May-2017	0.5	8.1	0.005	18	0.01			
aSW1d	27-Sep-2017	0.5	7.9	0.005	20	0.05	1	0.5	0.5
aSW1d	30-11-2017	1	7.6	0.011	20	0.205			
aSW1d						0.151			
Average		1	19.50	0.750		0.03775			
95%tile		1	8.09	0.012		0.087			
Status		H							