

Annual Environmental Report

2021



Kilkee

D0078-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

- 1.1 ANNUAL STATEMENT OF MEASURES
- 1.2 TREATMENT SUMMARY
- 1.3 ELV OVERVIEW
- 1.4 LICENSE SPECIFIC REPORT INCLUDED IN AER

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

- 2.1 KILKEE WWTP - UNTREATED DISCHARGE
 - 2.1.1 EFFLUENT MONITORING SUMMARY - KILKEE WWTP -
 - 2.1.2 AMBIENT MONITORING SUMMARY FOR UNTREATED DISCHARGE -

3 COMPLAINTS AND INCIDENTS

- 3.1 COMPLAINTS SUMMARY
- 3.2 REPORTED INCIDENTS SUMMARY
 - 3.2.1 SUMMARY OF INCIDENTS
 - 3.2.2 SUMMARY OF OVERALL INCIDENTS

4 INFRASTRUCTURAL ASSESSMENT AND PROGRAMME OF IMPROVEMENTS

- 4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT
 - 4.1.1 SWO IDENTIFICATION AND INSPECTION SUMMARY REPORT
- 4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS
 - 4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY
 - 4.2.2 IMPROVEMENT PROGRAMME SUMMARY
 - 4.2.3 SEWER INTEGRITY RISK ASSESSMENT

5 LICENCE SPECIFIC REPORTS

6 CERTIFICATION AND SIGN OFF

- 6.1 SUMMARY OF AER CONTENTS

7 APPENDIX

- 7.1 AMBIENT MONITORING SUMMARY

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0078-01, Kilkee, 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.

Works will be undertaken to reline the two rising mains in Kilkee. The works are programmed be complete in Q2 2022.

1.2 TREATMENT SUMMARY

- Currently there is no treatment provided at Kilkee . 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
TPEFF0300D0078SW001	KILKEE WWTP	Untreated	Non-Compliant	Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition (Carbonaceo mg/l COD-Cr 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	9	4	2	N/A	Fail
Suspended Solids mg/l	35	87.5	N/A	9	6	3	N/A	Fail
Total Oxidised Nitrogen (as N) mg/l	30	36	N/A	9	N/A	N/A	N/A	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/l	25	50	N/A	9	7	5	N/A	Fail
Ammonia-Total (as N) mg/l	10	12	N/A	9	6	5	N/A	Fail
pH pH units	9.00	9.00	N/A	9	N/A	N/A	N/A	Pass
Enterococci (Intestinal) cfu/100ml	N/A	N/A	N/A	1	N/A	N/A	N/A	

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)
Faecal coliforms no./100mls	N/A	N/A	N/A	1	N/A	N/A	N/A	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	1	N/A	N/A	N/A	
Total Nitrogen mg/l	N/A	N/A	N/A	1	N/A	N/A	N/A	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	1	N/A	N/A	N/A	
E. Coli MPN/100ml	N/A	N/A	N/A	1	N/A	N/A	N/A	

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):

The agglomeration is not served by a wastewater treatment plant.

Significance of Results:

WwTP required to meet ELVs stated in Wastewater Discharge Licence.

2.1.2 AMBIENT MONITORING SUMMARY FOR THE UNTREATED DISCHARGE TPEFF0300D0078SW001

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	86272, 159591	CW03004135SP1001	Yes	No	No	No	Unassigned
Downstream	86242 159547	CW03004135SP1002	Yes	No	No	No	Unassigned

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.

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

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)
Breach of ELV	WWTP upgrade required to meet ELV	1	Yes	No
Other	Broken Sewer Pipe	1	No	Yes
Uncontrolled release	Broken Sewer Pipe	1	No	Yes

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	Broken Sewer Pipe	1	No	Yes
Uncontrolled release	Broken Sewer Pipe	1	No	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	5
Number of Incidents reported to the EPA via EDEN in 2021	5
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
SW002	88284, 159550	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
D0078-SIP:01	Construction and operation of a secondary WWTP.	C	31/12/2015	Yes	At Planning Stage	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
D0078-IP:101	Works to reline the two rising mains in Kilkee to prevent bursts.	Incident Reduction	13/05/2022	

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
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
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?	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:

Date: 12/05/2022

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

Ambient Monitoring Report Summary Data

Ambient monitoring point/Coastal Monitoring Code	Irish Grid Reference	Designations					WFD Status
		Bathing Water	Drinking Water	FWPM	Shellfish		
Kilkee Bay 1: CW030041355P1002	086242; 159547	Yes	No	No	No	Unassigned	

Ambient Monitoring Results Summary

Monitoring Point	Date	Parameter	Biological Oxygen Demand	Dissolved Oxygen % Saturation	Ammonia N	Dissolved Oxygen	pH	Temperature	Total Dissolved Nitrogen N	Visual Inspection	Faecal Coliforms	Enterococci	E Coli
			mg/l	% O2	mg/l	mg/l	pH units	Degrees C	mg/l	Descriptive	no./100mls	cfu/100mls	no./100mls
CW030041355P1002	11-Jan-2021	-	<1	106.8	0.011	10.4	8.1	8.4	0.15	9 degrees wind temp with 39km/hr southwest winds. Overcast with cloud cover/raining. Nothing unusual			
CW030041355P1002	1-Feb-2021	-	<1	97.9	< 0.01	10.6	8.1	10.9	0.144	Air temp 8°C. Very windy 20-40km/hr. Var large white waves and swells. Therefore sample taken from s	25	129	25
CW030041355P1002	21-Mar-2021	-	<1	110.4	0.014	10.5	8.2	9.7	0.213	9°C. 22-30km/h. Southerly wind. Overcast 95% cloud cover. nothing unusual at site			
CW030041355P1002	12-Apr-2021	-	<1	123.6	< 0.01	12.5	8.4	10.5	0.029	15-19 km/hr winds. 9°C air temp. partly sunny with 60% cloud cover. nothing unusual at site			
CW030041355P1002	10-May-2021	-	<1	114.7	0.01	10.1	8.4	11.5	0.012	Cloudy with showers, 18km/hr winds from the southwest. Moderate breeze. Nothing unusual at site	< 10	10	0
CW030041355P1002	10-June-2021	-	1	126.1	< 0.01	10.3	7.9	16	0.014	15° air temp, full cloud cover, wind 14km/hr from south. Nothing unusual at site			
CW030041355P1002	5-July-2021	-	<1	101.6	0.011	8.27	8.4	16.1	0.017	14°C air temp, wind 14km/hr from southwest, 90% cloud cover. Dry. Litter visible on rock area			
CW030041355P1002	6-Aug-2021	-	<1	104.5	<0.01	8.05	8.3	18.7	0.011	30-50km west winds. 18°C. 50% cloud cover. dry nothing unusual at site taken at surgegate due to high winds.	150	220	140
CW030041355P1002	20-Sep-2021	-	1	97	< 0.01	8.71	8.1	16.3	0.021	16C air temp, no rain, near full cloud cover. nothing unusual observed			
CW030041355P1002	15-Oct-2021	-	<1	100.1	0.016	7.78	8.1	14	0.021	Full cloud cover, dry, 12 c air temp, wind gust 15km/hr. Nothing unusual at site. Sample taken from			
CW030041355P1002	11-Nov-2021	-	<1	97.6	< 0.01	8.27	8.2	14.4	0.047	15c Air Temp. Wind 15km/hr. NW winds. Cloudy with blue sky. Nothing unusual at site	< 10	< 10	< 10
CW030041355P1002	6-Dec-2021	-	<1	99.2	< 0.01	11.3	8	9.4	0.144	Bc. 80% cloud cover, heavy rain and hail showers, high winds 48-57km/hr nothing unusual at site.			
		Mean	<1	107									
		95%ile	<1	129									
		Status	High	High									

Bathing Water Results Summary (if relevant)

Monitoring point	Date	E Coli	Enterococci	Visual Inspection	Salinity	Colour (Apparent)	Turbidity
		MPN/100mls	cfu/100mls	Descriptive	ppt	Pt-Co	NTU
BPBLF030000070001	26-May-2021	< 10	10	Clear	32	25	2.2
BPBLF030000070001	1-June-2021	< 10	< 10	Clear	34	15	1.7
BPBLF030000070001	14-June-2021	< 10	< 10	Clear	34	9	0.9
BPBLF030000070001	21-June-2021	< 10	< 10	Clear	35	21	0.7
BPBLF030000070001	5-July-2021	10	< 10	Clear	35	74	3.4
BPBLF030000070001	19-July-2021	< 10	< 10	Clear	34	56	1.2
BPBLF030000070001	3-Aug-2021	31	10	Clear	34	8	0.7
BPBLF030000070001	16-Aug-2021	75	80	Clear	33	72	1.4
BPBLF030000070001	30-Aug-2021	199	< 10	Clear	33	15	1.2
BPBLF030000070001	6-Sep-2021	86	10	clear	33	150	0.6