Annual Environmental Report

2021

Killybegs

D0011-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0011-01, Killybegs, in Donegal 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 were no major capital or operational changes undertaken.

1.2 TREATMENT SUMMARY

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

- KILLYBEGS WWTP with a Plant Capacity PE of 4200, the treatment type is 2 - Secondary treatment

1.3 ELV OVERVIEW

SW100 is the discharge point reference for the municipal discharge. SW001 is the combined discharge between the treated municipal and industrial discharge (SW99) located at the outfall in the sea. 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
TPEFF0600D0011SW100	KILLYBEGS WWTP	Municipal discharge	Compliant	N/A

1.4 LICENCE SPECIFIC REPORTING INCLUDED IN AER

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

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 KILLYBEGS WWTP - COMBINED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - KILLYBEGS 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
Total Phosphorus (as P) mg/l	26	6.92	3.2
COD-Cr mg/l	26	519	101
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	26	311	50
Total Nitrogen mg/l	26	60	8.25
Suspended Solids mg/l	26	232	60
Hydraulic Capacity	N/A	N/A	N/A

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’.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF0600D0011SW100

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 with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Temperature °C	25	25	0	26	0	0	4.60	Pass
Ammonia-Total (as N) mg/l	0	0	0	26	0	0	0.33	
ortho-Phosphate (as P) - unspecified mg/l	0	0	0	26	0	0	1.29	
Total Phosphorus (as P) mg/l	0	0	0	26	0	0	1.60	
pH (pH units)	6-9	9	0	26	0	0	7.08	Pass
Suspended Solids mg/l	35	87.50	0	26	0	0	8.65	Pass
Total Nitrogen mg/l	0	0	0	26	0	0	3.38	
COD-Cr mg/l	125	250	0	26	0	0	26.73	Pass
Nitrite (as N) mg/l	0	0	0	26	0	0	0.04	
Dissolved Inorganic Nitrogen (as N) mg/l	0	0	0	26	0	0	1.76	

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 with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Nitrate (as N) mg/l	0	0	0	26	0	0	1.35	
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	25	0	26	0	0	1.07	Pass

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):

Not applicable

Significance of Results:

The WWTP is compliant with the ELV's set in the Wastewater Discharge Licence.

2.1.3 EFFLUENT MONITORING SUMMARY - COMBINED - TPEFF0600D0011SW001

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 with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	N/A	N/A	N/A	26	N/A	N/A	318	

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 with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Suspended Solids mg/l	N/A	N/A	N/A	26	N/A	N/A	104	
Nitrate (as N) mg/l	N/A	N/A	N/A	26	N/A	N/A	0.73	
Total Nitrogen mg/l	N/A	N/A	N/A	26	N/A	N/A	37.23	
Temperature °C	25	N/A	N/A	26	N/A	N/A	6.04	Pass
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	26	N/A	N/A	5.33	
Nitrite (as N) mg/l	N/A	N/A	N/A	26	N/A	N/A	0.89	
pH (pH units)	6-9	N/A	N/A	26	N/A	N/A	7.25	Pass
Conductivity 20 C µS/cm	N/A	N/A	N/A	26	N/A	N/A	6106	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	26	N/A	N/A	4.29	
Ammonia-Total (as N) Kg/h	25.2	30.24	0	24	0	0	0.65	Pass
Dissolved Inorganic Nitrogen (as N) Kg/h	27.15	32.5	0	24	0	0	0.70	Pass

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 with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
BOD, 5 days with Inhibition (Carbonaceous BOD) kg/hr	675	1350	0	24	0	0	6.10	Pass

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied
2 – For parameters where a mean ELV applies 3 – For pH the WWDA specifies a range of pH 6-9

Cause of Exceedance(s):

Not applicable

Significance of Results:

The WWTP is compliant with the ELV's set in the Wastewater Discharge Licence.

2.1.4 AMBIENT MONITORING SUMMARY FOR THE COMBINED DISCHARGE TPEFF0600D0011SW100

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 compliant with the ELV's set in the wastewater discharge licence.

The ambient monitoring results meet the required EQS.

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.

2.1.5 OPERATIONAL PERFORMANCE SUMMARY - KILLYBEGS WWTP

2.1.5.1 Treatment Efficiency Report - KILLYBEGS 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)
cBOD	23550	343	99%
TP	4116	388	91%
TN	3874	937	76%
COD	47628	8205	83%
SS	28396	2608	91%

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

2.1.5.2 Treatment Capacity Report Summary - KILLYBEGS 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.

KILLYBEGS WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	3153
DWF to the Treatment Plant (m^3/day)	1050
Current Hydraulic Loading - annual max (m^3/day)	2037

KILLYBEGS WWTP	
Average Hydraulic loading to the Treatment Plant (m^3/day)	1286
Organic Capacity (PE) - As Constructed	4200
Organic Capacity (PE) - Collected Load (peak week)[Note1]	2267
Organic Capacity (PE) - Remaining	1933
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.

2.1.6 SLUDGE / OTHER INPUTS - KILLYBEGS 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)
There is no Sludge and Other Input data for the Treatment Plant 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
There were no reported 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)
There were no reportable incidents in 2021.				

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	0
Number of Incidents reported to the EPA via EDEN in 2021	0
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	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 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
SW002	171246, 376186	Yes	Medium	Meeting	Unknown	Unknown	Monitored
SW003	171345, 375833	No	Medium	Meeting	Unknown	Unknown	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?	N/A
The SWO Assessment included the requirements of relevant of WWDL schedules?	No
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	No

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
D0011-SIP:06	Discharge to be discontinued: SW5 Manhole 3903	A	31/12/2011	Yes	Works Completed		
D0011-SIP:07	Elimination of all other SWOs on the collection network	C	31/12/2011	Yes	Works Completed		
D0011-SIP:09	New main pumping station (industrial & storm overflow pumping plant)	C	31/12/2010	Yes	Works Completed		
D0011-SIP:11	Provision of new storm water overflow (SW8) from main new pumping station in accordance with DoE SWO criteria	C	31/12/2010	Yes	Works Completed		
D0011-SIP:12	Separate industrial sewer network, including twin industrial rising mains & land based gravity outfall	C	31/12/2010	Yes	Works Completed		

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
D0011-SIP:13	SW6 (pump station No.1, St Catherine's Road) to operate as an emergency overflow only	A	31/12/2011	Yes	Works Completed		
D0011-SIP:01	Discharge to be discontinued: SW4 Manhole 2106	A	31/12/2011	Yes	Works Completed		
D0011-SIP:02	Discharge to be discontinued: SW6 pump station No.1, St Catherine's Road	A	31/12/2011	Yes	Works Completed		
D0011-SIP:03	Discharge to be discontinued: SW7 Pump station No.2, Shore Road	A	31/12/2011	Yes	Works Completed		
D0011-SIP:04	Discharge to be discontinued: SW1 Rough Point (new harbour development)	A	31/12/2011	Yes	Works Completed		
D0011-SIP:05	Discharge to be discontinued: SW3 Manhole 6605	A	31/12/2011	Yes	Works Completed		
D0011-SIP:08	Municipal WWTP and ancillary work	C	31/12/2011	Yes	Works Completed		
D0011-SIP:10	New marine outfall at Killybegs outer harbour	C	31/12/2010	Yes	Works Completed		
D0011-SIP:14	Upgrade existing sewage collection network	C	31/12/2011	Yes	Works Completed		

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 / or any Operational Improvements	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 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 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
Priority Substances Assessment	Yes	2015	No	
Toxicity of Final Effluent	Yes	2014	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
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	SWO
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	No

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

Signed: Date: 21/06/2021

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

County	Licence Ref.	Agglomeratic	Receiving Wa	Monitoring Location	Date	Temperatur e (^{0}C)	BOD mg/l	Ammonia (as N) mg/l	Orthophosp hate (as P) mg/l	Dissolved Oxygen %Sat	Total Oxidised Nitrogen (as N) mg/l	Dissolved Inorganic Nitrogen (as N) mg/l	Faecal Coliforms cfu/100ml	Escherichia coli cfu/100ml	Intestinal Enterococci cfu/100ml	Chlorophyll mg/m3
Donegal	D0011-01	Killybegs	Killybegs Out	**Number of samples Required**												
Issued on	19/12/2008			**Upstream: SW1u ()**												
				Downstream:SW1d ()												
				Killybegs - Asw-2 (Sea 1)	26/01/2021	8.1	3	<0.01	0.01	106	<0.1	<0.1				5.53
				Killybegs - Asw-2 (Sea 2)	26/01/2021	8	<1	<0.01	0.02	100.7	<0.1	<0.1				7.2
				Killybegs - Asw-2 (Sea 3)	26/01/2021	8.1	<1	<0.01	0.02	100.6	<0.1	<0.1				7.17
				Killybegs - Asw-2 (Sea 4)	26/01/2021	8.1	1	<0.01	<0.01	100.9	<0.1	<0.1				6.42
				Killybegs - Asw-2 (Sea 5)	26/01/2021	8.1	<1	<0.01	0.01	100.6	<0.1	<0.1				6.69
				Killybegs - Asw-2 (Sea 6)	26/01/2021	8	<1	<0.01	0.01	100.2	<0.1	<0.1				5.12
				Killybegs - Asw-2 (Shore 1)	26/01/2021	8	<1	<0.01	0.02	102.2	<0.1	<0.1				5.84
				Killybegs - Asw-2 (Shore 2)	26/01/2021	8.1	<1	<0.01	0.02	104.3	<0.1	<0.1				6.81
				Killybegs - Asw-2 (Shore 3)	26/01/2021	8.1	1	<0.01	0.02	103.4	<0.1	<0.1				6.47
				Killybegs - Asw-2 (Shore 4)	26/01/2021	8.1	<1	<0.01	0.02	104.9	<0.1	<0.1				5.46
				Killybegs - Asw-8 (1)	19/01/2021	7.7	3	0.02	0.18	103.6	<0.1	<0.1				25.59
				Killybegs - Asw-8 (2)	19/01/2021	7.1	1	0.01	0.06	106.4	<0.1	<0.1				11.98
				Killybegs - Asw-2 (Sea 1)	09/02/2021	8.8	<1	<0.01	0.02	100.5	<0.1	<0.1				5.35
				Killybegs - Asw-2 (Sea 2)	09/02/2021	8.8	<1	0.01	0.02	97.7	<0.1	<0.1				4.38
				Killybegs - Asw-2 (Sea 3)	09/02/2021	8.8	<1	0.01	0.02	97.6	<0.1	<0.1				6.42
				Killybegs - Asw-2 (Sea 4)	09/02/2021	8.8	<1	0.01	0.02	96.6	<0.1	<0.1				6.47
				Killybegs - Asw-2 (Sea 5)	09/02/2021	8.8	<1	<0.01	0.02	97.2	<0.1	<0.1				7.43
				Killybegs - Asw-2 (Sea 6)	09/02/2021	8.8	<1	<0.01	0.02	99.7	<0.1	<0.1				7.14
				Killybegs - Asw-2 (Shore 1)	09/02/2021	8.8	<1	0.01	0.02	98.4	<0.1	<0.1	<1			7.62
				Killybegs - Asw-2 (Shore 2)	09/02/2021	8.8	<1	<0.01	0.02	99.1	<0.1	<0.1	<1			6.51
				Killybegs - Asw-2 (Shore 3)	09/02/2021	8.8	<1	0.01	0.02	98.4	<0.1	<0.1	5			5.06
				Killybegs - Asw-2 (Shore 4)	09/02/2021	8.8	<1	0.01	0.02	99.2	<0.1	<0.1	5			6.24
				Killybegs - Asw-8 (1)	25/02/2021	9.4	2	0.11	0.04	92.5	<0.1	0.11				20.49
				Killybegs - Asw-8 (2)	25/02/2021	8.9	<1	0.03	0.02	93.4	<0.1	<0.1				8.76
				Killybegs - Asw-8 (1)	30/03/2021	10.6	1	0.15	0.09	88.4	0.37	0.52	780	780	110	9.15
				Killybegs - Asw-8 (2)	30/03/2021	10	1	0.05	0.04	88.2	<0.1	<0.1	95	95	<1	13.36
				Killybegs - Asw-2 (Sea 1)	13/04/2021	9.5	2	<0.01	0.03	106.5	<0.1	<0.1				5.33
				Killybegs - Asw-2 (Sea 2)	13/04/2021	9.5	2	0.02	0.01	102.4	<0.1	<0.1				7.71
				Killybegs - Asw-2 (Sea 3)	13/04/2021	9.5	1	<0.01	0.01	102	<0.1	<0.1	<1	<1	<1	7.44
				Killybegs - Asw-2 (Sea 4)	13/04/2021	9.5	1	<0.01	0.01	103	<0.1	<0.1	<1	<1	<1	5.89
				Killybegs - Asw-2 (Sea 5)	13/04/2021	9.5	2	0.01	0.02	102.5	<0.1	<0.1				7.42
				Killybegs - Asw-2(Sea 6)	13/04/2021	9.5	2	<0.01	0.01	104.8	<0.1	<0.1				7.35
				Killybegs - Asw-2 (Shore 1)	13/04/2021	9.5	2	0.05	0.03	101.6	<0.1	<0.1	<1	<1	<1	6.08
				Killybegs - Asw-2 (Shore 2)	13/04/2021	9.5	1	<0.01	0.02	106.6	<0.1	<0.1	<1	<1	<1	7.1
				Killybegs - Asw-2 (Shore 3)	13/04/2021	9.5	4	0.07	0.04	99.2	<0.1	<0.1	5	5	<1	6.8
				Killybegs - Asw-2 (Shore 4)	13/04/2021	9.5	1	0.02	0.03	105.5	<0.1	<0.1	<1	<1	<1	7.78
				Killybegs - Asw-8 (1)	27/04/2021	11.9	1	0.03	<0.01	100.1	<0.1	<0.1				15.18
				Killybegs - Asw-8 (2)	27/04/2021	11.8	1	0.01	0.04	99.9	<0.1	<0.1				6.92
				Killybegs - Asw-8 (1)	26/05/2021	11.2	1	0.04	0.03	98.4	<0.1	<0.1				8.89
				Killybegs - Asw-8 (2)	26/05/2021	11.3	1	0.01	0.03	99.2	<0.1	<0.1				8.95
				Killybegs - Asw-8 (1)	01/06/2021	11.5	2	<0.01	<0.01	109.8	<0.1	<0.1	<1	<1	<1	31.23
				Killybegs - Asw-8 (2)	01/06/2021	11.5	1	<0.01	<0.01	108.3	<0.1	<0.1	<1	<1	<1	17.04
				Killybegs - Asw-2 (Sea 1)	28/06/2021	11.5	1	<0.01	<0.01	104.9	<0.1	<0.1				5.3
				Killybegs - Asw-2 (Sea 2)	28/06/2021	11.5	<1	<0.01	<0.01	103.6	<0.1	<0.1				4.87
				Killybegs - Asw-2 (Sea 3)	28/06/2021	11.5	<1	<0.01	<0.01	103.1	<0.1	<0.1				4.94
				Killybegs - Asw-2 (Sea 4)	28/06/2021	11.5	<1	<0.01	<0.01	104	<0.1	<0.1				5.41
				Killybegs - Asw-2 (Sea 5)	28/06/2021	11.5	<1	<0.01	<0.01	103.5	<0.1	<0.1				6.08
				Killybegs - Asw-2(Sea 6)	28/06/2021	11.5	<1	<0.01	<0.01	104.1	<0.1	<0.1				7.35
				Killybegs - Asw-2 (Shore 1)	28/06/2021	11.5	<1	<0.01	<0.01	105.5	<0.1	<0.1				4.89
				Killybegs - Asw-2 (Shore 2)	28/06/2021	11.5	1	<0.01	<0.01	103.7	<0.1	<0.1				6.86
				Killybegs - Asw-2 (Shore 3)	28/06/2021	11.5	<1	<0.01	<0.01	104.4	<0.1	<0.1				5.55
				Killybegs - Asw-2 (Shore 4)	28/06/2021	11.5	<1	<0.01	0.03	104.7	<0.1	<0.1				7.64
				Killybegs - Asw-2 (Sea 1)	20/07/2021	19	1	<0.01	<0.01	105.4	<0.1	<0.1				6.37
				Killybegs - Asw-2 (Sea 2)	20/07/2021	19	1	<0.01	<0.01	106.9	<0.1	<0.1				8.28
				Killybegs - Asw-2 (Sea 3)	20/07/2021	19.1	1	0.01	<0.01	104.1	<0.1	<0.1	90	90	20	6.25
				Killybegs - Asw-2 (Sea 4)	20/07/2021	19.1	<1	<0.01	<0.01	105.5	<0.1	<0.1	100	100	100	5.35
				Killybegs - Asw-2 (Sea 5)	20/07/2021	19.1	1	<0.01	<0.01	103.2	<0.1	<0.1				3.39
				Killybegs - Asw-2(Sea 6)	20/07/2021	19.1	1	0.01	<0.01	103.9	<0.1	<0.1				5.98
				Killybegs - Asw-2 (Shore 1)	20/07/2021	19.1	2	<0.01	<0.01	105.8	0.16	0.16	<1	<1	<1	6.35
				Killybegs - Asw-2 (Shore 2)	20/07/2021	19.1	1	<0.01	<0.01	106.9	<0.1	<0.1	<1	<1	<1	5.43
				Killybegs - Asw-2 (Shore 3)	20/07/2021	19.1	1	0.01	<0.01	104.7	<0.1	<0.1	5	5	5	6.13
				Killybegs - Asw-2 (Shore 4)	20/07/2021	19.1	2	0.02	<0.01	106.5	<0.1	<0.1	40	40	<1	5.35
				Killybegs - Asw-8 (1)	20/07/2021	22	1	0.04	<0.01	107	<0.1	<0.1	170	170	20	10.04
				Killybegs - Asw-8 (2)	20/07/2021	22	1	0.01	<0.01	108	<0.1	<0.1	<1	<1	80	9.38
				Killybegs - Asw-8 (1)	18/08/2021	15.1	1	0.03	0.05	105.9	<0.1	<0.1				17.15
				Killybegs - Asw-8 (2)	18/08/2021	15.2	1	0.02	<0.01	106.8	<0.1	<0.1				15.59
				Killybegs - Asw-2 (Sea 1)	07/09/2021	14.5	2	0.06	<0.01	101.9	<0.1	<0.1				7.66
				Killybegs - Asw-2 (Sea 2)	07/09/2021	14.5	1	<0.01	<0.01	101.9	<0.1	<0.1				4.2
				Killybegs - Asw-2 (Sea 3)	07/09/2021	14.5	1	<0.01	<0.01	102.3	<0.1	<0.1	<1	<1	<1	4.28
				Killybegs - Asw-2 (Sea 4)	07/09/2021	14.5	1	<0.01	<0.01	101.1	<0.1	<0.1	<1	<1	<1	4.9
				Killybegs - Asw-2 (Sea 5)	07/09/2021	14.5	1	<0.01	<0.01	101.4	<0.1	<0.1				6.06
				Killybegs - Asw-2(Sea 6)	07/09/2021	14.5	1	<0.01	<0.01	102.8	<0.1	<0.1				4.69
				Killybegs - Asw-2 (Shore 1)	07/09/2021	14.5	2	<0.01	<0.01	104.3	<0.1	<0.1	35	35	<1	15.07
				Killybegs - Asw-2 (Shore 2)	07/09/2021	14.5	1	<0.1	<0.01	100.6	<0.1	<0.1	5	5	<1	6.43
				Killybegs - Asw-2 (Shore 3)	07/09/2021	14.5	2	<0.01	<0.01	103.4	<0.1	<0.1	15	15	<1	13.82
				Killybegs - Asw-2 (Shore 4)	07/09/2021	14.5	1	<0.01	<0.01	104	<0.1	<0.1	10	10	<1	12.06
				Killybegs - Asw-8 (1)	28/09/2021	14.6	1	0.11	<0.01	92	<0.1	0.11	10	10	5	6.66
				Killybegs - Asw-8 (2)	28/09/2021	14.6	<1	0.05	<0.01	96	<0.1	<0.1	5	5	10	7

County	Licence Ref.	Agglomeratio	Receiving Wa	Monitoring Location	Date	Temperatur e (^{o}C)	BOD mg/l	Ammonia (as N) mg/l	Orthophosp hate (as P) mg/l	Dissolved Oxygen %Sat	Total Oxidised Nitrogen (as N) mg/l	Dissolved Inorganic Nitrogen (as N) mg/l	Faecal Coliforms cfu/100ml	Escherichia coli cfu/100ml	Intestinal Enterococci cfu/100ml	Chlorophyll mg/m3
				Killybegs - Asw-8 (1)	21/10/2021	12.9	2	0.03	0.03	86.6	<0.1	<0.1				5.38
				Killybegs - Asw-8 (2)	21/10/2021	13.7	1	<0.01	<0.01	88	<0.1	0.1				6.91
				Killybegs - Asw-2 (Sea 1)	02/11/2021		<1	0.02	<0.01	99.2	<0.1	<0.1				16.31
				Killybegs - Asw-2 (Sea 2)	02/11/2021		<1	0.03	<0.01	98	<0.1	<0.1				34.05
				Killybegs - Asw-2 (Sea 3)	02/11/2021		<1	0.03	<0.01	98.3	<0.1	<0.1	95	95	35	29.43
				Killybegs - Asw-2 (Sea 4)	02/11/2021		<1	0.02	<0.01	98.5	<0.1	<0.1	115	115	30	23.2
				Killybegs - Asw-2 (Sea 5)	02/11/2021		1	0.02	<0.01	99.6	<0.1	<0.1				12.89
				Killybegs - Asw-2(Sea 6)	02/11/2021		<1	0.02	<0.01	99.6	<0.1	<0.1				6.08
				Killybegs - Asw-2 (Shore 1)	02/11/2021		1	0.05	<0.01	100.9	<0.1	<0.1	175	175	55	28.96
				Killybegs - Asw-2 (Shore 2)	02/11/2021		<1	0.02	<0.01	98.5	<0.1	<0.1	100	100	<1	10.58
				Killybegs - Asw-2 (Shore 3)	02/11/2021		1	0.04	<0.01	103.1	<0.1	<0.1	225	225	40	36.29
				Killybegs - Asw-2 (Shore 4)	02/11/2021		<1	0.04	<0.01	105.8	<0.1	<0.1	195	195	80	14.68
				Killybegs - Asw-2 (Sea 1)	23/11/2021		<1	<0.01	<0.01	97.2	<0.1	<0.1				7.8
				Killybegs - Asw-2 (Sea 2)	23/11/2021		<1	0.02	<0.01	96.5	<0.1	<0.1				9.25
				Killybegs - Asw-2 (Sea 3)	23/11/2021		<1	0.02	<0.01	97.6	<0.1	<0.1				7.6
				Killybegs - Asw-2 (Sea 4)	23/11/2021		<1	0.01	<0.01	98.2	<0.1	<0.1				7.41
				Killybegs - Asw-2 (Sea 5)	23/11/2021		<1	0.01	<0.01	96.9	<0.1	<0.1				6.73
				Killybegs - Asw-2(Sea 6)	23/11/2021		<1	0.01	<0.01	97.5	<0.1	<0.1				10.02
				Killybegs - Asw-2 (Shore 1)	23/11/2021		1	0.02	<0.01	96.4	<0.1	<0.1				8.34
				Killybegs - Asw-2 (Shore 2)	23/11/2021		<1	0.01	<0.01	96.6	<0.1	<0.1				6.22
				Killybegs - Asw-2 (Shore 3)	23/11/2021		<1	0.03	<0.01	95.6	<0.1	<0.1				4.46
				Killybegs - Asw-2 (Shore 4)	23/11/2021		<1	0.02	<0.01	95.8	<0.1	<0.1				5.01
				Killybegs - Asw-2 (Sea 1)	14/12/2021	10	1	< 0.01	< 0.01	100.9	< 0.1	< 0.1				5.55
				Killybegs - Asw-2 (Sea 2)	14/12/2021	10	< 1	< 0.01	< 0.01	97.7	< 0.1	< 0.1				6.83
				Killybegs - Asw-2 (Sea 3)	14/12/2021	10	< 1	< 0.1	< 0.1	69.2	< 0.1	< 0.1				5.67
				Killybegs - Asw-2 (Sea 4)	14/12/2021	10	< 1	< 0.1	< 0.01	95.4	< 0.1	< 0.1				7.39
				Killybegs - Asw-2 (Sea 5)	14/12/2021	10	< 1	< 0.01	< 0.1	96	< 0.1	< 0.1				8.71
				Killybegs - Asw-2(Sea 6)	14/12/2021	10	< 1	< 0.01	< 0.01	96.7	< 0.1	< 0.1				6.92
				Killybegs - Asw-2 (Shore 1)	14/12/2021	10	< 1	0.03	< 0.01	106.1	< 0.1	< 0.1				9.25
				Killybegs - Asw-2 (Shore 2)	14/12/2021	10	< 1	< 0.01	< 0.01	98.6	< 0.1	< 0.1				10.09
				Killybegs - Asw-2 (Shore 3)	14/12/2021	10	< 1	< 0.01	< 0.01	100.1	< 0.1	< 0.1				6.78
				Killybegs - Asw-2 (Shore 4)	14/12/2021	10	< 1	< 0.01	< 0.01	100	< 0.1	< 0.1				6.15