Annual Environmental Report

2020

Killybegs

D0011-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2020 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	6.77	2.25
COD-Cr mg/l	26	265	120.73
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	26	148	54.80
Total Nitrogen mg/l	26	48.7	17.11
Suspended Solids mg/l	26	164	61.38
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	4.46	Pass
Ammonia-Total (as N) mg/l	0	0	0	26	0	0	0.22	
ortho-Phosphate (as P) - unspecified mg/l	0	0	0	26	0	0	0.88	
Total Phosphorus (as P) mg/l	0	0	0	26	0	0	0.97	
pH (pH units)	6-9	9	0	26	0	0	6.95	Pass
Suspended Solids mg/l	35	35	0	26	0	0	4.84	Pass
Total Nitrogen mg/l	0	0	0	26	0	0	2.70	
COD-Cr mg/l	125	125	0	26	0	0	20.30	Pass
Nitrite (as N) mg/l	0	0	0	26	0	0	0.05	
Dissolved Inorganic Nitrogen (as N) mg/l	0	0	0	26	0	0	1.58	

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	1.31	
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	25	0	26	0	0	1.23	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		

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	128.34	
Nitrate (as N) mg/l	N/A	N/A	N/A	26	N/A	N/A	0.89	
Total Nitrogen mg/l	N/A	N/A	N/A	26	N/A	N/A	57.26	
Temperature °C	25	N/A	N/A	26	N/A	N/A	4.7	Pass
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	26	N/A	N/A	7.08	
Nitrite (as N) mg/l	N/A	N/A	N/A	26	N/A	N/A	0.99	
pH (pH units)	6-9	N/A	N/A	26	N/A	N/A	7.05	Pass
Conductivity 20 C µS/cm	N/A	N/A	N/A	26	N/A	N/A	8119	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	26	N/A	N/A	4.92	
Ammonia-Total (as N) Kg/h	25.2	30.24	0	24	0	0	2.49	Pass
Dissolved Inorganic Nitrogen (as N) Kg/h	27.15	32.5	0	24	0	0	2.69	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	21.59	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	1391.9	39.32	97
TP	54.0	25.50	53
TN	409.6	90.28	78
COD	4080.6	737.01	82
SS	1800.5	180.28	90

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)	5404

KILLYBEGS WWTP	
Average Hydraulic loading to the Treatment Plant (m^3/day)	1169
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 2020.			

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 2020.				

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2020	0
Number of Incidents reported to the EPA via EDEN in 2020	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 2020 (No. of events)	Total volume discharged in 2020 (m3)	Monitoring Status
SW002	171767, 375722	Yes	Low	Meeting	107	125458	Monitored
SW006	171346, 376461	No	Low	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?	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 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 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
Priority Substances Assessment	Yes	2015	No	
Toxicity of Final Effluent	Yes	2014	No	

5.1 PRIORITY SUBSTANCES ASSESSMENT

The Priority Substances Assessment Report has been included in the AER 2015

5.2 TOXICITY OF FINAL EFFLUENT

The Toxicity of Final Effluent Report has been included in the AER 2014

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	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?	N/A
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: 30/07/2021

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

COASTAL MONITORING: KILLYBEGS

Category	MONTH	Location	Lab Ref	Date	Ammonia (as N)	BOD	Chlorophyll	Dissolved Inorganic Nitrogen (as N)	Dissolved Oxygen % Saturation	E coli	Intestinal Enterococci	Faecal Coliforms (E. coli)	Orthophosphate	Temperature	Total Oxidised Nitrogen N	Total Nitrogen N	Salinity	pH	Suspended Solids
					(mg/l)	(mg/l)	mg/m3	(mg/l)	(mg/l)	mpn/100mls	cfu/100	cfu/100mls	(mg/l)	°C	(mg/l)	(mg/l)	PSU	pH units	(mg/l)
Coastal Water Body	January	Killybegs - Asw-8 (1)	202500144	28-Jan-20	0.38	1	49.95	0.38	96.4	850	850	270	0.1	8.7	<0.1	NT	NT	NT	NT
Coastal Water Body	January	Killybegs - Asw-8 (2)	202500145	28-Jan-20	0.35	2	6.05	0.35	87.6	215	215	150	0.14	8.8	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Sea 1)	202500134	25-Feb-20	0.02	1	18.78	<0.1	100.1	NT	NT	NT	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Sea 2)	202500135	25-Feb-20	0.01	<1	11.52	<0.1	99.9	NT	NT	NT	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Sea 3)	202500136	25-Feb-20	<0.01	1	2.35	<0.1	100.8	5	5	<1	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Sea 4)	202500137	25-Feb-20	<0.01	<1	2.57	<0.1	100.5	10	5	<1	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Sea 5)	202500138	25-Feb-20	0.02	<1	1.89	<0.1	100.4	NT	NT	NT	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Sea 6)	202500139	25-Feb-20	<0.01	<1	2.11	<0.1	100.5	NT	NT	NT	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Shore 1)	202500140	25-Feb-20	0.02	1	5.49	<0.1	104.9	15	15	5	0.02	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Shore 2)	202500141	25-Feb-20	0.01	1	0.87	<0.1	103	<1	<1	<1	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Shore 3)	202500142	25-Feb-20	0.01	<1	2.02	<0.1	101.3	5	5	<1	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	February	Killybegs - Asw-2 (Shore 4)	202500143	25-Feb-20	<0.01	1	2.04	<0.1	101.9	5	<1	<1	0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	March	Killybegs - Asw-8 (1)	202500798	24-Mar-20	0.8	11	26.15	0.8	71.9	NT	NT	NT	0.79	8.4	<0.1	NT	NT	NT	NT
Coastal Water Body	March	Killybegs - Asw-8 (2)	202500799	24-Mar-20	0.2	1	23.6	0.2	96.4	NT	NT	NT	0.07	8.2	<0.1	NT	NT	NT	NT
Coastal Water Body	May	Killybegs - Asw-8 (1)	202501255	20-May-20	0.07	5	44.46	<0.1	99.3	NT	NT	NT	0.11	12.7	<0.1	NT	NT	NT	NT
Coastal Water Body	May	Killybegs - Asw-8 (2)	202501256	20-May-20	0.58	2	18.88	0.58	106.7	NT	NT	NT	<0.01	13	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-8 (1)	202501543	18-Jun-20	0.02	7	97.71	<0.1	105.2	10	60	10	0.01	14.1	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-8 (2)	202501544	18-Jun-20	<0.01	3	49.99	<0.1	102.3	5	40	5	<0.01	14.1	<0.1	NT	NT	NT	NT
Coastal Water Body	May	Killybegs - Asw-8 (1)	202501255	20-May-20	0.07	5	44.46	<0.1	99.3	NT	NT	NT	0.11	12.7	<0.1	NT	NT	NT	NT
Coastal Water Body	May	Killybegs - Asw-8 (2)	202501256	20-May-20	0.58	2	18.88	0.58	106.7	NT	NT	NT	<0.01	13	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Sea 1)	202500772	16-Jun-20	<0.01	5	4.22	<0.1	104.7	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Sea 2)	202500773	16-Jun-20	<0.01	1	14.72	<0.1	104	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Sea 3)	202500774	16-Jun-20	<0.01	2	19.92	<0.1	104.9	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Sea 4)	202500775	16-Jun-20	<0.01	2	19.93	<0.1	105.2	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Sea 5)	202500776	16-Jun-20	<0.01	2	3.43	<0.1	105.5	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Sea 6)	202500777	16-Jun-20	<0.01	2	17.55	<0.1	104	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Shore 1)	202500778	16-Jun-20	0.04	1	30.9	<0.1	103.9	NT	NT	NT	0.04	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Shore 2)	202500779	16-Jun-20	<0.01	2	3.93	<0.1	102.3	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Shore 3)	202500780	16-Jun-20	<0.01	2	19.31	<0.1	103.6	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-2 (Shore 4)	202500781	16-Jun-20	<0.01	2	19.4	<0.1	102.2	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-8 (1)	202501543	18-Jun-20	0.02	7	97.71	<0.1	105.2	10	60	10	0.01	14.1	<0.1	NT	NT	NT	NT
Coastal Water Body	June	Killybegs - Asw-8 (2)	202501544	18-Jun-20	<0.01	3	49.99	<0.1	102.3	5	40	5	<0.01	14.1	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 1)	202501647	07-Jul-20	0.02	<1	25.72	<0.1	99	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 2)	202501648	07-Jul-20	<0.01	2	41.34	<0.1	98.7	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 3)	202501649	07-Jul-20	<0.01	<1	15	<0.1	99.4	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 4)	202501650	07-Jul-20	0.17	<1	35.14	0.17	98.9	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 5)	202501651	07-Jul-20	<0.01	<1	24.67	<0.1	98.1	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 6)	202501652	07-Jul-20	0.01	<1	27.01	<0.1	98.7	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 1)	202501653	07-Jul-20	0.02	<1	23.2	<0.1	97.1	NT	NT	NT	0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 2)	202501654	07-Jul-20	0.05	<1	28.18	<0.1	98.5	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 3)	202501655	07-Jul-20	<0.01	<1	25.14	<0.1	98.2	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 4)	202501656	07-Jul-20	<0.01	<1	27.86	<0.1	97.4	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 1)	202501891	21-Jul-20	<0.01	1	3.81	<0.1	96.7	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 2)	202501925	21-Jul-20	<0.01	<1	3.8	<0.1	97.1	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 3)	202501926	21-Jul-20	<0.01	<1	3.5	<0.1	96.8	<1	<1	<1	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 4)	202501927	21-Jul-20	<0.01	<1	4.77	<0.1	96.4	<1	<1	<1	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 5)	202501928	21-Jul-20	<0.01	<1	3.08	<0.1	97.1	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Sea 6)	202501929	21-Jul-20	<0.01	<1	4.41	<0.1	96.9	NT	NT	NT	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 1)	202501930	21-Jul-20	0.02	<1	3.56	<0.1	96.6	5	<1	5	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 2)	202501931	21-Jul-20	<0.01	<1	4.46	<0.1	95.4	<1	<1	<1	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 3)	202501932	21-Jul-20	0.17	1	7.17	0.17	95.5	<1	<1	<1	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-2 (Shore 4)	202501933	21-Jul-20	<0.01	<1	8.81	<0.1	97.4	<1	<1	<1	<0.01	14	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-8 (1)	202501657	30-Jul-20	0.01	1	10.8	0.01	99.1	NT	NT	NT	<0.01	16.2	<0.1	NT	NT	NT	NT
Coastal Water Body	July	Killybegs - Asw-8 (2)	202501658	30-Jul-20	0.2	2	20.62	0.2	98.2	NT	NT	NT	<0.01	16.1	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Sea 1)	202502215	11-Aug-20	<0.01	1	8.45	<0.1	104.4	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Sea 2)	202502216	11-Aug-20	<0.01	<1	5.13	<0.1	108.2	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Sea 3)	202502217	11-Aug-20	<0.01	1	8.49	<0.1	104.9	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Sea 4)	202502218	11-Aug-20	<0.01	<1	9.99	<0.1	107.1	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT

Coastal Water Body	August	Killybegs - Asw-2 (Sea 5)	202502219	11-Aug-20	<0.01	<1	9.54	<0.1	107.2	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Sea 6)	202502220	11-Aug-20	0.81	1	7.09	0.81	107.6	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Shore 1)	202502221	11-Aug-20	<0.01	1	10.66	<0.1	111.8	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Shore 2)	202502222	11-Aug-20	<0.01	<1	9.2	<0.1	111.6	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Shore 3)	202502223	11-Aug-20	<0.01	<1	10.08	<0.1	113.2	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-2 (Shore 4)	202502224	11-Aug-20	<0.01	<1	8.7	<0.1	111.7	NT	NT	NT	<0.01	13.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-8 (1)	202502225	27-Aug-20	<0.01	1	14.16	<0.1	97.2	NT	NT	NT	<0.01	15.3	<0.1	NT	NT	NT	NT
Coastal Water Body	August	Killybegs - Asw-8 (2)	202502226	27-Aug-20	<0.01	2	36.7	<0.1	97.3	NT	NT	NT	<0.01	15.5	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 1)	202502227	01-Sep-20	<0.01	<1	8.5	<0.1	98.9	NT	NT	NT	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 2)	202502228	01-Sep-20	<0.01	<1	8.95	<0.1	98.8	NT	NT	NT	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 3)	202502229	01-Sep-20	<0.01	<1	8.74	<0.1	98.2	<1	<1	<1	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 4)	202502230	01-Sep-20	<0.01	<1	7.67	<0.1	97.9	<1	<1	<1	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 5)	202502231	01-Sep-20	<0.01	<1	10.53	<0.1	98.1	NT	NT	NT	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 6)	202502232	01-Sep-20	<0.01	<1	8.9	<0.1	98.4	NT	NT	NT	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 1)	202502233	01-Sep-20	<0.01	<1	15.32	<0.1	98.9	15	<1	15	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 2)	202502234	01-Sep-20	<0.01	<1	10.87	<0.1	98.8	5	<1	5	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 3)	202502235	01-Sep-20	<0.01	<1	8.92	<0.1	96.4	<1	<1	<1	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 4)	202502236	01-Sep-20	<0.01	<1	7.92	<0.1	98.5	<1	<1	<1	<0.01	15	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-8 (1)	202502643	22-Sep-20	0.05	1	11.81	<0.1	97.3	NT	NT	NT	0.01	15.1	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-8 (2)	202502644	22-Sep-20	0.21	7	33.74	0.21	89.5	NT	NT	NT	0.51	15.1	<0.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 1)	202503880	15-Sep-20	<0.41	2	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 2)	202503881	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 3)	202503882	15-Sep-20	<0.41	2	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 4)	202503883	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 5)	202503884	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Sea 6)	202503885	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 1)	202503886	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 2)	202503887	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 3)	202503889	15-Sep-20	<0.41	1	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	September	Killybegs - Asw-2 (Shore 4)	202503888	15-Sep-20	<0.41	2	<7	<0.31	NT	NT	NT	NT	<0.6	14.8	<3.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Sea 1)	202502633	06-Oct-20	<0.01	<1	5.48	<0.1	95.9	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Sea 2)	202502634	06-Oct-20	<0.01	<1	6.44	<0.1	95	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Sea 3)	202502635	06-Oct-20	<0.01	<1	5.81	<0.1	95.6	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Sea 4)	202502636	06-Oct-20	<0.01	<1	5.21	<0.1	96.1	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Sea 5)	202502637	06-Oct-20	<0.01	1	6.87	<0.1	94.9	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Sea 6)	202502638	06-Oct-20	<0.01	1	5.71	<0.1	97.5	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Shore 1)	202502639	06-Oct-20	0.3	<1	18.72	0.3	98.6	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Shore 2)	202502640	06-Oct-20	<0.01	<1	6.47	0.33	96.8	NT	NT	NT	<0.01	12.1	0.33	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Shore 3)	202502641	06-Oct-20	<0.01	<1	5.77	<0.1	95	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-2 (Shore 4)	202502642	06-Oct-20	<0.01	1	6.3	<0.1	94.2	NT	NT	NT	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-8 (1)	202503165	20-Oct-20	0.02	1	25.81	<0.1	100.5	3400	430	3400	0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	October	Killybegs - Asw-8 (2)	202503166	20-Oct-20	0.02	2	19.67	<0.1	101.3	1800	450	1800	<0.01	12.1	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 1)	202503155	10-Nov-20	0.01	<1	7.37	<0.1	96.8	NT	NT	NT	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 2)	202503156	10-Nov-20	0.05	<1	7.52	<0.1	99.6	NT	NT	NT	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 3)	202503157	10-Nov-20	0.02	<1	8.12	<0.1	99	<1	5	<1	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 4)	202503158	10-Nov-20	<0.01	<1	8.75	<0.1	97.7	<1	<1	<1	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 5)	202503159	10-Nov-20	<0.01	<1	7.28	<0.1	98.8	NT	NT	NT	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 6)	202503160	10-Nov-20	0.01	1	6.45	<0.1	100.2	NT	NT	NT	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 1)	202503161	10-Nov-20	0.03	1	7.06	<0.1	99.2	15	<1	15	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 2)	202503162	10-Nov-20	0.01	1	7.59	<0.1	96.9	15	<1	15	0.04	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 3)	202503163	10-Nov-20	0.02	<1	7.17	<0.1	94.1	5	<1	5	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 4)	202503164	10-Nov-20	0.03	1	6.4	<0.1	96.4	5	5	5	<0.01	11	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 1)	202503611	24-Nov-20	0.03	1	31.32	<0.1	103.7	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 2)	202503612	24-Nov-20	0.02	1	22.8	<0.1	100.4	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 3)	202503613	24-Nov-20	0.02	1	20.02	<0.1	100.1	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 4)	202503614	24-Nov-20	0.02	1	24.05	<0.1	100.6	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 5)	202503615	24-Nov-20	0.04	1	6.42	<0.1	98.9	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Sea 6)	202503616	24-Nov-20	<0.01	<1	7.41	<0.1	98.9	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 1)	202503617	24-Nov-20	0.03	1	18.01	<0.1	101.8	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 2)	202503618	24-Nov-20	<0.01	1	15.71	<0.1	101.3	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 3)	202503619	24-Nov-20	0.02	1	13.73	<0.1	104.9	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-2 (Shore 4)	202503620	24-Nov-20	0.04	1	33.42	<0.1	102.6	NT	NT	NT	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-8 (1)	202503434	24-Nov-20	0.03	1	12.12	<0.1	103.4	530	60	530	<0.01	9	<0.1	NT	NT	NT	NT
Coastal Water Body	November	Killybegs - Asw-8 (2)	202503435	24-Nov-20	0.02	1	7.76	<0.1	104.4	470	70	470	<0.01	9	<0.1	NT	NT	NT	NT