Annual Environmental Report

2018

Ballbriggan

D0023-01

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Revision Number	Description of Change	Author(s)	Approved By	Date of Approval
1	Statement of Measures	M. O'Reilly	M. O'Reilly	04/11/2019

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2018 AER

This Annual Environmental Report has been prepared for D0023-01, Ballbriggan, in Dublin in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified reports are included as an appendix to the AER as follows:

1.1 Licence specific reporting included in AER

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

1.2 Treatment Type

The agglomeration is served by a wastewater treatment plant Barnageeragh WWTP with a Plant Capacity PE of 70000. The treatment process includes the following:

1.2.1 Barnageeragh WWTP

Treatment type	Yes / No	Details
Preliminary Treatment	Yes	screening / grit removal
Primary Treatment	No	
Secondary Treatment	Yes	SBR
Nutrient Removal	No	
Tertiary Treatment	Yes	UV Treatment

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 2.2 Discharges from the agglomeration.

1.3 ELV Overview

1.3.1 Barnageeragh WWTP

Compliance Status	
Were all parameters compliant for Barnageeragh WWTP treatment plant	Yes
Where non compliant see Table 2.2.1 for details of parameters	

1.4 Sludge Removal

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

Treatment Plant	Sludge type	Quantity	Unit	% Dry Solids	Destination
Barnageeragh WWTP	Cake Sludge	265.74	Weight (Tonnes)	25.4	H&L Environmental Services Ltd
Barnageeragh WWTP	Cake Sludge	42.62	Weight (Tonnes)	25.4	Owens Quarry
Barnageeragh WWTP	Cake Sludge	2033	Weight (Tonnes)	22.9	Carrollstown, Bellewstown and Barrockstown, Co. Meath by Enva Ltd.

Annual Statement of Measures

The diversion of flows from Loughshinny will not be fully operational until the Loughshinny pump station has been completed (target completion date of Q2 2020). This pump station is currently at tender stage. Full diversion of flows from Loughshinny to Barnageeragh WWTP via the Loughshinny pump station is dependent on the completion of the Rush Road pump station. Works on this pump station (provision of additional storage) is ongoing, and expected to be complete in Q4 2019.

2 MONITORING REPORTS SUMMARY

2.1 Summary report on monthly influent monitoring

A summary of influent monitoring for the treatment plant is presented in below. This monitoring is primarily undertaken in order to determine the overall efficiency of the plant in removing pollutants from the raw wastewater.

2.1.1 Influent Monitoring Summary - Barnageeragh WWTP

Parameters	Number of Samples	Annual Max	Annual Mean
COD-Cr mg/l	44	1702	497.03
Total Nitrogen mg/l	44	67.3	44.52
Total Phosphorus (as P) mg/l	44	11.8	5.71
Suspended Solids mg/l	44	1036	302.33
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	44	622	211.78
Hydraulic Capacity	0	24348	10917

If other inputs in the form of sludge / leachate are added to the WWTP then these are included in Section 3.5 if applicable.

Significance of Results:

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity as detailed further in Section 3.2. The annual maximum hydraulic loading is less than the peak Treatment Plant Capacity as detailed further in Section 3.2.

2.2 Discharges from the agglomeration

2.2.1 Effluent Monitoring Summary - Barnageeragh WWTP

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	17	0	0	1.62	Pass
Nitrite (as N) mg/l	0	0	0	17	0	0	0.12	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	0	44	0	0	4.01	Pass
Salinity PSU	0	0	0	12	0	0	0	Pass
Dissolved Inorganic Nitrogen (as N) mg/l	0	0	0	17	0	0	20.97	Pass
Total Nitrogen mg/l	0	0	0	17	0	0	29.04	Pass
Total Oxidised Nitrogen (as N) mg/l	0	0	0	17	0	0	1.73	Pass
Total Nitrogen mg/l	0	0	0	43	0	0	16.11	Pass
Conductivity 20 C µS/cm	0	0	0	44	0	0	920.24	Pass
Nitrite (as N) mg/l	0	0	0	44	0	0	0.23	Pass
Ammonia-Total (as N) mg/l	0	0	0	17	0	0	19.23	Pass

ortho-Phosphate (as P) - unspecified mg/l	0	0	0	44	0	0	2.27	Pass
ortho-Phosphate (as P) - unspecified mg/l	0	0	0	17	0	0	2.38	Pass
PCB 118 µg/l	0	0	0	2	0	0	0	Pass
PCB 138 µg/l	0	0	0	2	0	0	0	Pass
Dissolved Inorganic Nitrogen (as N) mg/l	0	0	0	44	0	0	15.26	Pass
pH pH units	0	0	0	17	0	0	7.74	Pass
Ammonia-Total (as N) mg/l	0	0	0	44	0	0	11.66	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	0	0	0	17	0	0	77.41	Pass
COD-Cr mg/l	125	250	0	44	0	0	33.79	Pass
Total Phosphorus (as P) mg/l	0	0	0	44	0	0	2.78	Pass
PCB 101 µg/l	0	0	0	2	0	0	0	Pass
PCB 153 µg/l	0	0	0	2	0	0	0	Pass
PCB 52 µg/l	0	0	0	2	0	0	0	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)
PCB 28 µg/l	0	0	0	2	0	0	0	Pass
Total Oxidised Nitrogen (as N) mg/l	0	0	0	44	0	0	3.61	Pass
Suspended Solids mg/l	35	87.5	0	44	0	0	3.95	Pass
pH pH units	0	0	0	44	0	0	7.58	Pass
Nitrate (as N) mg/l	0	0	0	44	0	0	3.37	Pass
Suspended Solids mg/l	0	0	0	17	0	0	115.57	Pass
Conductivity 20 C µS/cm	0	0	0	17	0	0	837.42	Pass
Colour Hazen	0	0	0	4	0	0	0	Pass
COD-Cr mg/l	0	0	0	17	0	0	216.01	Pass
Total Phosphorus (as P) mg/l	0	0	0	17	0	0	3.63	Pass
PCB 180 µg/l	0	0	0	2	0	0	0	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

Cause of Exceedance(s):

Not Applicable.

Significance of Results:

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

2.3 Ambient monitoring summary

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.

2.3.1 Ambient Monitoring Report Summary - Barnageeragh WWTP

The table below provides details of ambient monitoring locations and details of any designations as sensitive areas.

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
Downstream	324604, 263044	TPEFF0900D0023SW001	No	No	No	Yes	Good

2.3.2 Ambient Monitoring Parameter Summary - Barnageeragh WWTP

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

The discharge from the WWTP has no observable negative impact on the Water Framework Directive status.

In terms of the bathing water and shellfish designations, the discharge from this agglomeration is not considered to be impacting on these designations.

3 OPERATIONAL REPORTS SUMMARY

3.1 Treatment Efficiency Report

Treatment efficiency is based on the removal of key pollutants from the influent wastewater by the treatment plant. In essence the calculation is based on the balance of load coming into the plant versus the load leaving the plant. The efficiency is presented as a percentage removal rate.

A summary presentation of the efficiency of the treatment process including information for all the parameters specified in the licence is included below:

3.1.1 Treatment Efficiency Report Summary - Barnageeragh WWTP

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)	Comment
TP	18068.08	11829.75	34.53	
cBOD	686126.15	190190.45	72.28	
TN	140878.08	84912.4	39.73	
COD	1572859.41	495620.97	68.49	
SS	956737.59	303553.27	68.27	

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

3.2 Treatment Capacity Report Summary

Treatment capacity is an assessment of the hydraulic (flow) and organic (the amount of pollutants) load a treatment plant is designed to treat versus the current loading of that plant.

Barnageeragh WWTP	
Peak Hydraulic Capacity (m3/day) - As Constructed	48300

DWF to the Treatment Plant (m3/day)	16100
Current Hydraulic Loading - annual max (m3/day)	24348
Average Hydraulic loading to the Treatment Plant (m3/day)	10917
Organic Capacity (PE) - As Constructed	70000
Organic Capacity (PE) - Collected Load (peak week)	41511
Organic Capacity (PE) - Remaining	28489
Will the capacity be exceeded in the next three years? (Yes/No)	No

3.3 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 is no Complaint data included in the AER.			

3.4 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.

3.4.1 Summary of Incidents

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Other	Plant or equipment breakdown at WWTP	1	No	Yes
Spillage	Plant or equipment breakdown at WWTP	1	No	No
Uncontrolled release	EO caused by power failure	1	No	Yes
Uncontrolled release	EO caused by power failure	1	No	Yes
Other	Plant or equipment breakdown at WWTP	1	No	No
Uncontrolled release	Plant or equipment breakdown at WWTP	1	No	Yes
Uncontrolled release	EO caused by power failure	3	No	Yes
Uncontrolled release	EO caused by power failure	1	No	Yes
Uncontrolled release	SWO Exceptional rainfall	1	No	Yes
Spillage	Plant or equipment breakdown at WWTP	1	No	Yes
Uncontrolled release	EO caused by pump failure	2	No	No

3.4.2 Summary of Overall Incidents

Question	Answer
Number of Incidents in 2018	14
Number of Incidents reported to the EPA via EDEN in 2018	14
Explanation of any discrepancies between the two numbers above	N/A

3.5 Sludge / Other inputs to the 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)?[3]	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP?[2](Y/N)
There is no Sludge and Other Input data for the Treatment Plant included in the AER.							

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:

No Appendix Included.

4.1.1 SWO Identification

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow (High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2018 (No. of events)	Total volume discharged in 2018 (m3)	Monitoring Status
SW8	E324471 N261086	No	Unknown	Not yet Assessed			Not Monitored
SW1	320484, 263870	Yes	Unknown	Not yet Assessed			Not Monitored
SW10	320880, 260080	Yes	Unknown	Meeting			Not Monitored
SW11	327302, 259650	Yes	Unknown	Meeting			Not Monitored
SW12	325868, 259587	Yes	Unknown	Meeting			Not Monitored
SW2	321167, 26363	Yes	Unknown	Meeting			Not Monitored

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow (High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2018 (No. of events)	Total volume discharged in 2018 (m3)	Monitoring Status
SW3	321595, 263493	Yes	Unknown	Meeting			Not Monitored
SW4	320928, 263617	Yes	Unknown	Meeting			Not Monitored
SW5	320449, 263813	Yes	Unknown	Meeting			Not Monitored
SW6	320928, 263617	Yes	Unknown	Not yet Assessed			Not Monitored
SW7	325541, 261086	Yes	Unknown	Meeting			Not Monitored
SW8	324471, 260817	Yes	Unknown	Not yet Assessed			Not Monitored
SW9	324016, 261090	Yes	Unknown	Meeting			Not Monitored

4.1.2 Inspection Summary Report

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

Have the EPA been advised of any additional SWOs / charges 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)	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
Balbriggan/Skerries Wastewater Treatment Scheme (Phase III) - Sewer Network Upgrade including infrastructure to direct WW from Loughshinny & Killalane to Barnageeragh WWTP	C	31/12/2010	Yes	Work ongoing on-site	28/05/2020	Expected completion Q2 2020
Balbriggan/Skerries Wastewater Treatment Scheme (Phase III) - Sewer Network Upgrade to improve primary discharge	C	31/12/2010	Yes	Works Completed	Balbriggan/Skerries Wastewater Treatment Scheme (Phase III) - Sewer Network Upgrade to improve primary discharge	
Connection of Kelly's Bay P.S. to Barnageeragh WWTP. SW6 to cease or revert to SWO complying with DoE criteria.	C	31/12/2010	Yes	Works Completed		
Discharge to cease: SW014 Killalane septic tank	A	31/12/2010	Yes	Works Completed		
Discharge to cease: SW006 Hoar's Rock, Skerries to cease or revert to a surface water overflow	A	31/12/2010	Yes	Works Completed		

Discharge to cease: SW015 Loughshinny septic tank	A	31/12/2010	Yes	At Planning Stage	28/05/2020	
Upgrading of sewer network to ensure SWOs comply with DoE criteria	C		No	Work ongoing on-site	28/05/2020	

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

4.2.2 Improvement Programme Summary

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

4.2.3 Sewer Integrity Risk Assessment

The utilisation of multiple capital maintenance programmes and the outputs of the workshops with the Local Authority Operations Staff held under the programme can be used to satisfy the requirements of Condition 5 regarding network integrity. Improvement works identified by way of these programmes and workshops will be included in the Improvements Summary Table.

5 LICENCE SPECIFIC REPORTS

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides list of the various reports required for this agglomeration and a brief summary of their recommendations.

5.a Licence Specific Reports Summary Table

Licence Specific Report	Required by licence	Year included in AER	Included in this AER	Reference to relevant section of AER
Priority Substances Assessment	Yes	2013	No	
Shellfish Impact Assessment	Yes	2015	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?	No
List reason e.g. additional SWO identified	N/A
Is there a need to request/advise the EPA of any modifications to the existing WWDL?	No
List reason e.g. changes to monitoring requirements	N/A
Have these processes commenced?	
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:

Signed: Date: 27/02/2019

This AER has been produced by Irish Water's Environmental Information System (EIMS) and has been electronically signed off in that system for and on behalf of ,

Eleanor Roche

Acting Head of Environmental Regulation.

7 APPENDIX

Appendix
Appendix 7.1 - Ambient monitoring summary

Balbriggan Ambient Monitoring Summary 2018

Ambient Monitoring Report Summary Table

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Bathing Water	Drinking Water	FWPM	Shellfish	Current WFD Status
Marine Monitoring Point Northwestern Irish Sea – Balbriggan	N/A	DB800	No	No	No	Yes	Good (Coastal Water Quality Status: 2010 - 2015)
Marine Monitoring Point Northwestern Irish Sea – Skerries	N/A	DB780	No	No	No	Yes	Good (Coastal Water Quality Status: 2010 - 2015)
Shore Monitoring Point Balbriggan North Beach	320385E 264052N		Yes	No	No	Yes	Good (Coastal Water Quality Status: 2010 - 2015)
Shore Monitoring Point Skerries South Beach	325569E 260666N		Yes	No	No	Yes	Good (Coastal Water Quality Status: 2010 - 2015)
Shore Monitoring Point Loughshinny Beach	327233E 256837N		Yes	No	No	Yes	Good (Coastal Water Quality Status: 2010 - 2015)

Significance of Results

- The WWTP was compliant with the ELVs set out in the wastewater discharge licence.
- The discharge from the wastewater treatment plant does not have an observable negative 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.
- In terms of the bathing water and shellfish designations, the discharge from this agglomeration is not considered to be impacting on these designations.

2018 Marine Ambient Monitoring Summary

Sampling Point Description	Sample Date	Ammonia mg/l as N	BOD mg/l O_2	Chlorophyll µg/l	DIN mg/l	DO % Sat.	pH	Ortho Phosphate mg/l P	Salinity PSU	Temp °C	TON mg/l as N	TN mg/l as N
DB800	29/06/18	0.37	4	<4.00	<1.15	117.6	8.28	<0.02	31.11	17.7	<0.78	<0.2
DB800	13/09/18	<0.02	<1	7.25	<0.23	102	8.08	<0.02	34.6	14.2		<0.2
DB780	29/06/18	0.37	3	<4.00	<1.15	111.7	8.28	<0.02	31.7	17.5	<0.78	<0.2
DB780	13/09/18	<0.02	<1	<4.00	<0.23	102	8.07	0.02	34.5	14.2	<0.23	<0.2

Bathing Water Results 2018

Balbriggan Front Beach

Date	E-Coli Result	Intestinal Enterococci Result	Water Sample Status
05/09/2018	148	15	Excellent
20/08/2018	1274	170	Poor
07/08/2018	857	85	Sufficient
23/07/2018	109	24	Excellent
09/07/2018	52	14	Excellent
25/06/2018	52	7	Excellent
11/06/2018	52	29	Excellent
06/06/2018	148	44	Excellent
23/05/2018	31	6	Excellent

(Source: Beaches.ie)

In order to assess these results, the Bathing Water Quality Regulations, 2008 (S.I No 79 of 2008), was consulted. It was found that in 7 of 9 cases, Balbriggan Front Beach achieved "*Excellent*" results for the Bathing Water season 2018.

Balbriggan Front Beach is classified as achieving Sufficient Water Quality based on the assessment of bacteriological results for the period 2015 to 2018. Balbriggan Front Beach was also classified as achieving sufficient water quality during the previous assessment periods 2014 to 2017, 2013 to 2016, 2012 to 2015 and 2011 to 2014.

Skerries South Beach

Date	E-Coli Result	Intestinal Enterococci Result	Water Sample Status
05/09/2018	<10	<1	Excellent
20/08/2018	31	5	Excellent
07/08/2018	<10	1	Excellent
23/07/2018	10	1	Excellent
09/07/2018	<10	1	Excellent
25/06/2018	<10	<1	Excellent
11/06/2018	86	3	Excellent
06/06/2018	10	1	Excellent
23/05/2018	<10	<1	Excellent

(Source: Beaches.ie)

The Bathing Water Quality Regulations, 2008 (S.I No 79 of 2008), were consulted to assess the above 2017 results. It was found that in all cases Skerries South Beach achieved "Excellent" results for the Bathing Water season 2018. It is therefore reasonable to assume that the Balbriggan WWTP final effluent is not having a negative impact on this designated bathing water area.

Loughshinny Beach

Date	E-Coli Result	Intestinal Enterococci Result	Water Sample Status
05/09/2018	86	5	Excellent
20/08/2018	30	34	Excellent
07/08/2018	10	2	Excellent
23/07/2018	30	9	Excellent
09/07/2018	20	8	Excellent
25/06/2018	20	7	Excellent
11/06/2018	<10	21	Excellent
06/06/2018	31	10	Excellent
23/05/2018	10	3	Excellent

(Source: Beaches.ie)

The Bathing Water Quality Regulations, 2008 (S.I No 79 of 2008), were consulted to assess the above results. It was found that in all nine cases, Loughshinny Beach, achieved “Excellent” results.

Loughshinny Beach is classified as having Good Water Quality based on the assessment of bacteriological results for the period 2015 to 2018. Loughshinny Beach was classified as having poor water quality during the previous assessment periods 2013 to 2016 and 2012 to 2015 and achieved sufficient water quality during the period 2011 to 2014.

FCC Bathing Water Monitoring Data

Location	Sampled Date	E. coli (MPN/100ml)	Enterococci (CFU/100ml)	Floating Materials	Mineral Oil (Visual)	pH	Phenols (Olfactory)	Salinity (PSU)	Surfactants	Visual Inspection
(49902) Balbriggan Front Beach	23/05/2018	31	6	Absent	Absent	8.1	Absent	32.5	Absent	Normal
(49902) Balbriggan Front Beach	06/06/2018	148	44	Absent	Absent	8.2	Absent	32.6	Absent	Normal
(49902) Balbriggan Front Beach	11/06/2018	52	29	Absent	Absent	8.1	Absent	31.8	Absent	Normal
(49902) Balbriggan Front Beach	25/06/2018	52	7	Absent	Absent	8.1	Absent	33.5	Absent	Normal
(49902) Balbriggan Front Beach	09/07/2018	52	14	Absent	Absent	8.2	Absent	33.7	Absent	Normal
(49902) Balbriggan Front Beach	23/07/2018	109	24	Absent	Absent	8.2	Absent	34	Absent	Normal
(49902) Balbriggan Front Beach	07/08/2018	857	85	Absent	Absent	8	Absent	33.9	Absent	Normal
(49902) Balbriggan Front Beach	20/08/2018	1274	170	Absent	Absent	8	Absent	32.6	Absent	Normal
(49902) Balbriggan Front Beach	21/08/2018	201	50	Absent	Absent	8.1	Absent	33.5	Absent	-
(49902) Balbriggan Front Beach	05/09/2018	148	15	Absent	Absent	8	Absent	33.7	Absent	Normal
(49907) Skerries South Beach	23/05/2018	<10	<1	Absent	Absent	8.2	Absent	33.1	Absent	Normal
(49907) Skerries South Beach	06/06/2018	10	1	Absent	Absent	8.2	Absent	33.3	Absent	Normal
(49907) Skerries South Beach	11/06/2018	86	3	Absent	Absent	8.1	Absent	33.1	Absent	Normal
(49907) Skerries South Beach	25/06/2018	<10	<1	Absent	Absent	8.1	Absent	33.9	Absent	Normal
(49907) Skerries South Beach	09/07/2018	<10	1	Absent	Absent	8.1	Absent	33.8	Absent	Normal
(49907) Skerries South Beach	23/07/2018	10	1	Absent	Absent	8.1	Absent	32.8	Absent	Normal
(49907) Skerries South Beach	07/08/2018	<10	1	Absent	Absent	8.1	Absent	33.5	Absent	Normal
(49907) Skerries South Beach	20/08/2018	31	5	Absent	Absent	8	Absent	32.5	Absent	Normal
(49907) Skerries South Beach	05/09/2018	<10	<1	Absent	Absent	8	Absent	33.7	Absent	Normal
(49908) Lough Shinny Beach	23/05/2018	10	3	Absent	Absent	8.2	Absent	33.8	Absent	Normal
(49908) Lough Shinny Beach	06/06/2018	31	10	Absent	Absent	8.2	Absent	33.5	Absent	Normal
(49908) Lough Shinny Beach	11/06/2018	<10	21	Absent	Absent	8.1	Absent	31.2	Absent	Normal
(49908) Lough Shinny Beach	25/06/2018	20	7	Absent	Absent	8.1	Absent	33.6	Absent	Normal
(49908) Lough Shinny Beach	09/07/2018	20	8	Absent	Absent	8.1	Absent	33.8	Absent	Normal
(49908) Lough Shinny Beach	23/07/2018	30	9	Absent	Absent	8.1	Absent	33	Absent	Normal
(49908) Lough Shinny Beach	07/08/2018	10	2	Absent	Absent	8.1	Absent	33.2	Absent	Normal
(49908) Lough Shinny Beach	20/08/2018	30	34	Absent	Absent	8	Absent	33.3	Absent	Normal
(49908) Lough Shinny Beach	05/09/2018	86	5	Absent	Absent	8	Absent	33.6	Absent	Normal