Annual Environmental Report

2019

Dunmore East

D0170-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2019 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 Dunmore East WWTP - Treated Discharge

2.1.1 Influent Summary - Dunmore East WWTP

2.1.2 Effluent Monitoring Summary - Dunmore East WWTP -

2.1.3 Ambient Monitoring Summary for The Treatment Plant Discharge -

2.1.4 Operational Reports Summary for Dunmore East WWTP

2.1.5 Sludge/Other Inputs to Dunmore East WWTP

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

5.1 Priority Substances Assessment

5.2 Shellfish Impact Assessment

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 2019 AER

This Annual Environmental Report has been prepared for D0170-01, Dunmore East, in Waterford 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.

No works planned or identified.

1.2 TREATMENT SUMMARY

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

- Dunmore East WWTP with a Plant Capacity PE of 8991, the treatment type is 2 - Secondary treatment

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
TPEFF3100D0170SW001	Dunmore East WWTP	Treated	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 DUNMORE EAST WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - DUNMORE EAST 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
COD-Cr mg/l	12	1283	361.24
Suspended Solids mg/l	12	550	165.95
Total Phosphorus (as P) mg/l	12	8.8	3.83
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	601	108.58
Hydraulic Capacity	N/A	7641	1329

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’. The design of the wastewater tretament plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF3100D0170SW001

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	125	250	N/A	12	N/A	N/A	14	Pass
Total Oxidised Nitrogen (as N) mg/l	35	42	N/A	12	N/A	N/A	3.97	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	5.71	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	12	N/A	N/A	2	Pass
Ammonia-Total (as N) mg/l	15	18	N/A	12	N/A	N/A	0.71	Pass
pH pH units	10	10	N/A	12	N/A	N/A	7.41	Pass
Total Nitrogen mg/l	N/A	N/A	N/A	12	N/A	N/A	5.59	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	1.54	
Faecal coliforms no./100mls	N/A	N/A	N/A	7	N/A	N/A	7848.12	

ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	12	N/A	N/A	1.41	

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied

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 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF3100D0170SW001

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 Status
Ambient Monitoring Point	270412.49, 101660.38	CW31002096SR7003 (SR620 - Templeton Church)	Yes	No	No	No	Moderate
Ambient Monitoring Point	269449.51, 99588.28	CW31002096SR7006 (SR650 - Dunmore East)	Yes	No	No	No	Moderate

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 does not 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.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - DUNMORE EAST WWTP

2.1.4.1 Treatment Efficiency Report - Dunmore East 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)
TP	1667	558	67
TN	N/A	2031	N/A
SS	72256	2069	97
COD	157291	5070	97
cBOD	47278	725	98

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

2.1.4.2 *Treatment Capacity Report Summary - Dunmore East 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.

Dunmore East WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	5841
DWF to the Treatment Plant (m^3/day)	1947
Current Hydraulic Loading - annual max (m^3/day)	7641
Average Hydraulic loading to the Treatment Plant (m^3/day)	1329
Organic Capacity (PE) - As Constructed	8991
Organic Capacity (PE) - Collected Load (peak week)[Note1]	3436
Organic Capacity (PE) - Remaining	5555
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.

2.1.5 SLUDGE / OTHER INPUTS - DUNMORE EAST 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
2	Blocked Sewer	0	2

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)
Uncontrolled release	Adverse Weather	1	No	Yes
Uncontrolled release	SWO exceptional rainfall and overflow expected	1	Yes	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2019	2
Number of Incidents reported to the EPA via EDEN in 2019	2
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 2019 (No. of events)	Total volume discharged in 2019 (m3)	Monitoring Status
SW006	268967, 99639	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	268221.55, 100410.18	No	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	269090.80, 100152.70	No	Low	Meeting	Unknown	Unknown	Not Monitored
SW007	269098, 100659	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW008	269213, 99883	Yes	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?	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
D0170-SIP:01	SW4 (Harbour PS) - Upgrade as required to ensure Storm Water Overflows comply with DoE criteria	C	31/07/2013	Yes	Works Completed		

D0170-SIP:03	SW7 (Ard na Coille) - Upgrade as required to ensure Storm Water Overflows comply with DoE criteria	C	31/07/2013	Yes	Works Completed		
D0170-SIP:05	Dunmore East waste water collection system	C	31/07/2013	Yes	Works Completed		
D0170-SIP:08	Primary discharge SW000 to cease	C	31/12/2013	Yes	Works Completed		
D0170-SIP:09	Storm water overflow SW005 to cease	C	31/07/2013	Yes	Works Completed		
D0170-SIP:02	SW5 (Strand PS) - Upgrade as required to ensure Storm Water Overflows comply with DoE criteria	C	15/05/2013	Yes	Works Completed		
D0170-SIP:04	Discharges from SW004 to cease	C	15/05/2013	Yes	Works Completed		
D0170-SIP:06	Dunmore East waste water treatment plant (WWTP), ancillary works and treated effluent outfall	C	31/12/2013	Yes	Works Completed		
D0170-SIP:07	Eliminate secondary discharges to the Dunmore East Streams	C	30/04/2012	Yes	Works Completed		
D0170-SIP:10	SW1 Future (WWTP storm tank) - Upgrade as required to ensure Storm Water Overflows comply with DoE criteria	C	31/07/2013	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	2016	No	
Shellfish Impact Assessment	Yes	2017	No	

5.1 PRIORITY SUBSTANCES ASSESSMENT

The Priority Substances Assessment Report has been included in the AER 2016

5.2 SHELLFISH IMPACT ASSESSMENT

The Shellfish Impact Assessment Report has been included in the 2017 AER

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	Yes
List reason e.g. changes to monitoring requirements	Change to Ambient monitoring locations
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: 29/04/2020

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 Summary

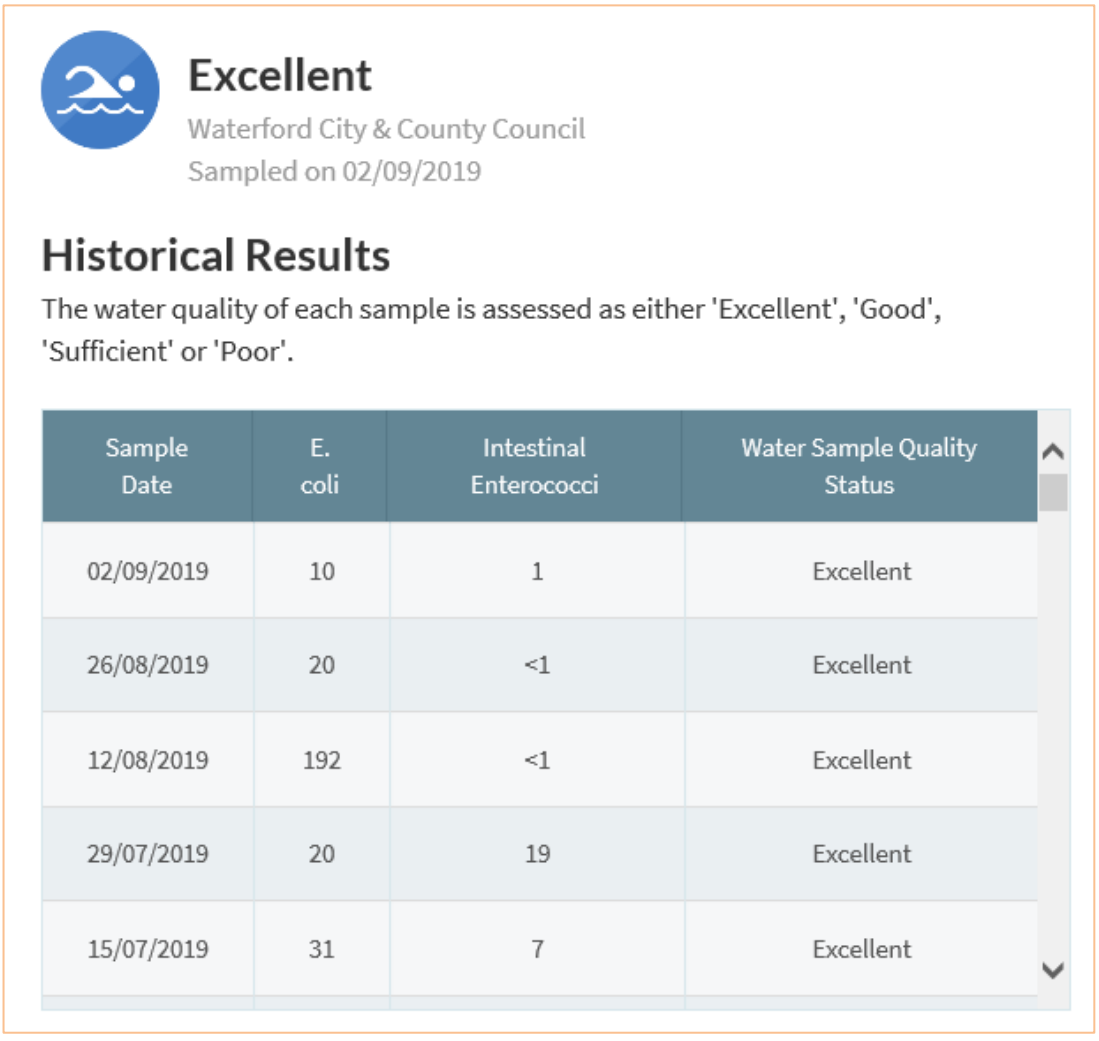
The WWDL [Schedule B4] requires Shore and Coastal Water Monitoring.

Shore Monitoring:

4no. samples are required during the main part of the Bathing Season [mid May – end August] at Dunmore Strand. This monitoring is carried out on behalf of Waterford City & County Council by the Health Services Executive (HSE) as part of our Bathing Water Monitoring.

Dunmore East retained Blue Flag status in 2019 for The Main Strand and Counsellors Strand.

Bathing water quality is in compliance with National and European requirements.



Excellent

Waterford City & County Council
Sampled on 02/09/2019

Historical Results

The water quality of each sample is assessed as either 'Excellent', 'Good', 'Sufficient' or 'Poor'.

Sample Date	E. coli	Intestinal Enterococci	Water Sample Quality Status
02/09/2019	10	1	Excellent
26/08/2019	20	<1	Excellent
12/08/2019	192	<1	Excellent
29/07/2019	20	19	Excellent
15/07/2019	31	7	Excellent

Dunmore Strand 2019- https://www.beaches.ie/find-a-beach/#/beach/IESEBWC100_0000_0200

Excellent

Waterford City & County Council
Sampled on 02/09/2019

Historical Results

The water quality of each sample is assessed as either 'Excellent', 'Good', 'Sufficient' or 'Poor'.

Sample Date	E. coli	Intestinal Enterococci	Water Sample Quality Status
02/09/2019	<10	3	Excellent
26/08/2019	10	1	Excellent
12/08/2019	207	4	Excellent
29/07/2019	<10	2	Excellent
15/07/2019	<10	2	Excellent

Counsellor's Strand 2019 - https://www.beaches.ie/find-a-beach/#/beach/IESEBWC100_0000_0100

Coastal Water Monitoring:

There are four specified ambient coastal monitoring point are at;

- aSW1u (E268926, N099516),
- aSW1d (E269208, N099914),
- SR 620 (E270776, N100264) and
- SR650 (E269663, N098392).

The locations of these four sampling points are as follows:

Table 7.2.1 Ambient Monitoring Location: H&S Issues

Name	Easting	Northing	Comment
SR620	270776	100264	In open sea, circa 1.5km offshore, requires boat to sample. EPA sampling to be used.
SR650	269663	098392	In open sea, circa 1.5km offshore, requires boat to sample. EPA sampling to be used.
aSW1u	268926	099516	Discontinued following commissioning of WWTP.
aSW1d	269208	099914	Discontinued following commissioning of WWTP.

SR620 2018 Data [Note 2019 Does not include DIN there fore 2018 data is provided]

Station No	Sample Label	Survey Date	Depth Bed	Sample Depth	Salinity S ‰	Temp S °C	pH	DO S % Sat	B.O.D. mg/l C	TON mg/l N	NH3 mg/l N	PO4 µg/l P	DIN mg/l N	Lab	WB
SR620	SR620B	29/08/2018	8.2	7.68	34.26	15.41	8	103.2	0.5	0.016	0.011	5.2	0.027	EPA Dubli	Waterford Harbour
SR620	SR620S	29/08/2018	8.2	0	33.83	15.59	8	102.2	0.5	0.034	0.014	6.3	0.048	EPA Dubli	Waterford Harbour
SR620	SR620B	28/05/2018	8	7.53	33.83	12.35	8.2	108.4		0.035	0.027	2.5	0.062	EPA Dubli	Waterford Harbour
SR620	SR620S	28/05/2018	8	0	31.2	14.88	8.2	112.4		0.1	0.026	2.5	0.126	EPA Dubli	Waterford Harbour
SR620	SR620S	07/02/2018	10	0	35.12	8.24	8	97.4		0.26	0.021	23	0.281	EPA Dubli	Waterford Harbour
SR620	SR620B	07/02/2018	10	9.49	33.9	8.54	8	97.7		0.097	0.02	16	0.117	EPA Dubli	Waterford Harbour

SR650 2018 Data [Note 2019 Does not include DIN there fore 2018 data is provided]

Station No	Sample Label	Survey Date	Depth Bed	Sample Depth	Salinity S ‰	Temp S °C	pH	DO S % Sat	B.O.D. mg/l C	TON mg/l N	NH3 mg/l N	PO4 µg/l P	DIN mg/l N	Lab	WB
SR650	SR650B	29/08/2018	16	15.48	34.51	15.31	8	103.5	0.5	0.005	0.016	2.5	0.021	EPA Dubli	Waterford Harbour
SR650	SR650B	28/05/2018	17	13.07	33.99	12.32	8.2	111	0.5	0.005	0.018	2.5	0.023	EPA Dubli	Waterford Harbour
SR650	SR650S	29/08/2018	16	0	33.77	15.73	8	104.2	0.5	0.038	0.021	6	0.059	EPA Dubli	Waterford Harbour
SR650	SR650S	28/05/2018	17	0	30.68	14.78	8.2	112.9	0.5	0.11	0.031	2.5	0.141	EPA Dubli	Waterford Harbour
SR650	SR650B	07/02/2018	18	18	34.1	7.94	8	98.9	0.5	0.19	0.028	38	0.218	EPA Dubli	Waterford Harbour
SR650	SR650S	07/02/2018	18	0	29.97	7.06	8	97.4	0.5	0.45	0.028	18	0.478	EPA Dubli	Waterford Harbour

WaterbodyCode	Waterbody	MonitoringStationCod	MonitoringStationName	SampleDate	SampleMethod	ParameterName	ParameterUnitSho	Result	TextResult	LimitOfDetection	ReportResult
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Ammonia-Total (as	mg/l	0.018		0.01	0.018
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Ammonia-Total (as	mg/l	0.016		0.01	0.016
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Ammonia-Total (as	mg/l	0.032		0.01	0.032
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Ammonia-Total (as	mg/l	0.025		0.01	0.025
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	BOD - 5 days (Total	mg/l		<1	1	0.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	BOD - 5 days (Total	mg/l		<1	1	0.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Chlorophyll	µg/l	3.5		1	3.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Chlorophyll	µg/l	3.1		1	3.1
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Depth	m	0			0
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Depth	m	10			10
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Depth	m	0.3			0.3
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Depth	m	9.4			9.4
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Dissolved Oxygen	% Saturation	101		1	101
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Dissolved Oxygen	% Saturation	116		1	116
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Dissolved Oxygen	% Saturation	98		1	98
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Dissolved Oxygen	% Saturation	98		1	98
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	ortho-Phosphate (a	mg/l	0.0087		0.005	0.0087
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	ortho-Phosphate (a	mg/l		<0.005	0.005	0.0025
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	ortho-Phosphate (a	mg/l	0.0056		0.005	0.0056
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	ortho-Phosphate (a	mg/l		<0.005	0.005	0.0025
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	pH	pH units	8.2		2	8.2
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	pH	pH units	8.1		2	8.1
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	pH	pH units	8		2	8
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	pH	pH units	8.1		2	8.1
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Salinity	PSU	30.8		0.1	30.8
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Salinity	PSU	34.5		0.1	34.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Salinity	PSU	34.2		0.1	34.2
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Salinity	PSU	35.1		0.1	35.1
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Salinity(Lab)	0/oo	30.7		0.1	30.7
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Salinity(Lab)	0/oo	34.4		0.1	34.4
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Salinity(Lab)	0/oo	33.9		0.1	33.9
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Salinity(Lab)	0/oo	34.4		0.1	34.4
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Silica (as SiO2)	mg/l		<0.1	0.1	0.05
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Silica (as SiO2)	mg/l		<0.1	0.1	0.05
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Silica (as SiO2)	mg/l	0.19		0.1	0.19
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Silica (as SiO2)	mg/l	0.13		0.1	0.13
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	StationDepth	m	10.5		0.1	10.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	StationDepth	m	10.5		0.1	10.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	StationDepth	m	9.4		0.1	9.4
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	StationDepth	m	9.4		0.1	9.4
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Temperature	°C	13.2			13.2
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Temperature	°C	15.4			15.4
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Temperature	°C	16			16
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Temperature	°C	15.5			15.5
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Total Oxidised Nitr	mg/l	0.25		0.01	0.25
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Total Oxidised Nitr	mg/l		<0.01	0.01	0.005
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Total Oxidised Nitr	mg/l	0.049		0.01	0.049
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Total Oxidised Nitr	mg/l	0.016		0.01	0.016
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Surface	Transparency	m	2.1			2.1

WaterbodyCode	Waterbody	MonitoringStationCod	MonitoringStationName	SampleDate	SampleMethod	ParameterName	ParameterUnitSho	Result	TextResult	LimitOfDetection	ReportResult
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	25/06/2019 13:41	TRaC Bottom	Transparency	m	2.1			2.1
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:26	TRaC Surface	Transparency	m	3			3
IE_SE_100_0000	Coastal	CW31002096SR7003	SR620 - Templeton Church	19/09/2019 13:29	TRaC Bottom	Transparency	m	3			3

WaterbodyCode	Waterbody	MonitoringStationCod	MonitoringStationName	SampleDate	SampleMethod	ParameterName	ParameterUnitSho	Result	TextResult	LimitOfDetection	ReportResult
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Ammonia-Total (as	mg/l	0.019		0.01	0.019
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Ammonia-Total (as	mg/l	0.016		0.01	0.016
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Ammonia-Total (as	mg/l	0.12		0.01	0.12
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Ammonia-Total (as	mg/l	0.03		0.01	0.03
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	BOD - 5 days (Total	mg/l		<1	1	0.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	BOD - 5 days (Total	mg/l		<1	1	0.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Chlorophyll	µg/l	3.3		1	3.3
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Chlorophyll	µg/l	1.5		1	1.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Chlorophyll	µg/l	1.8		1	1.8
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Chlorophyll	µg/l		<1	1	0.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Depth	m	13.1			13.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Depth	m	0			0
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Depth	m	0.1			0.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Depth	m	11.6			11.6
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Dissolved Oxygen	% Saturation	119		1	119
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Dissolved Oxygen	% Saturation	100		1	100
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Dissolved Oxygen	% Saturation	100		1	100
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Dissolved Oxygen	% Saturation	98		1	98
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	ortho-Phosphate (a	mg/l		<0.005	0.005	0.0025
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	ortho-Phosphate (a	mg/l		<0.005	0.005	0.0025
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	ortho-Phosphate (a	mg/l	0.083		0.005	0.083
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	ortho-Phosphate (a	mg/l	0.006		0.005	0.006
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	pH	pH units	8.2		2	8.2
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	pH	pH units	8.1		2	8.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	pH	pH units	8.1		2	8.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	pH	pH units	8.1		2	8.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Salinity	PSU	34.6		0.1	34.6
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Salinity	PSU	31.1		0.1	31.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Salinity	PSU	34.3		0.1	34.3
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Salinity	PSU	35.2		0.1	35.2
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Salinity(Lab)	0/oo	34.5		0.1	34.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Salinity(Lab)	0/oo	31		0.1	31
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Salinity(Lab)	0/oo	33.4		0.1	33.4
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Salinity(Lab)	0/oo	34.5		0.1	34.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Silica (as SiO2)	mg/l		<0.1	0.1	0.05
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Silica (as SiO2)	mg/l		<0.1	0.1	0.05
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Silica (as SiO2)	mg/l	0.25		0.1	0.25
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Silica (as SiO2)	mg/l	0.12		0.1	0.12
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	StationDepth	m	17		0.1	17
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	StationDepth	m	17		0.1	17
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	StationDepth	m	11.6		0.1	11.6
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	StationDepth	m	11.6		0.1	11.6

WaterbodyCode	Waterbody	MonitoringStationCod	MonitoringStationName	SampleDate	SampleMethod	ParameterName	ParameterUnitSho	Result	TextResult	LimitOfDetection	ReportResult
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Temperature	°C	15.4			15.4
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Temperature	°C	13.2			13.2
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Temperature	°C	16			16
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Temperature	°C	15.5			15.5
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Total Oxidised Nitr	mg/l	0.16		0.01	0.16
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Total Oxidised Nitr	mg/l	0.012		0.01	0.012
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Total Oxidised Nitr	mg/l	0.094		0.01	0.094
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Total Oxidised Nitr	mg/l	0.018		0.01	0.018
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Surface	Transparency	m	2.1			2.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	25/06/2019 14:55	TRaC Bottom	Transparency	m	2.1			2.1
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:47	TRaC Surface	Transparency	m	3			3
IE_SE_100_0000	Coastal	CW31002096SR7006	SR650 - Dunmore East	19/09/2019 14:52	TRaC Bottom	Transparency	m	3			3