

Annual Environmental Report

2021



Ringaskidy

D0057-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0057-01, Ringaskidy, in Cork 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.

1.2 TREATMENT SUMMARY

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

- Cork Lower Harbour WWTP with a Plant Capacity PE of 65000, 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
TPEFF0500D0057SW001	Cork Lower Harbour WWTP	Combined	Non-Compliant	BOD, 5 days with Inhibition (Carbonaceo mg/l COD-Cr mg/l Suspended Solids mg/l Total Nitrogen mg/l

1.4 LICENCE SPECIFIC REPORTING

Assessment / Report

There are no Licence Specific Reports included in this AER.

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 CORK LOWER HARBOUR WWTP - COMBINED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - CORK LOWER HARBOUR 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
BOD, 5 days with Inhibition (Carbonaceo mg/l)	26	404	157
Total Phosphorus (as P) mg/l	26	24	7.12
Total Nitrogen mg/l	26	65	34
COD-Cr mg/l	26	1903	545
Suspended Solids mg/l	26	993	226
pH pH units	1	7.20	7.20
Hydraulic Capacity	N/A	51944	11815

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 treatment 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 - TPEFF0500D0057SW100

Parameter	UWWTD ELV	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	125	N/A	26	1	0	N/A	Pass
Suspended Solids mg/l	35	35	N/A	26	1	0	N/A	Pass
Total Nitrogen mg/l (mean)	15	N/A	N/A	26	N/A	N/A	13.56	Pass
BOD, 5 days with Inhibition (Carbonaceous) mg/l	25	25	N/A	26	0	0	N/A	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):

N/A

Significance of Results:

The WWTP is compliant with the ELVs set in the Urban Wastewater Treatment Directive.

2.1.3 EFFLUENT MONITORING SUMMARY - TPEFF0500D0057SW001 COMBINED DISCHARGE

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	125	N/A	26	13	13	272	Fail
Suspended Solids mg/l	35	35	N/A	26	21	21	147	Fail
Total Nitrogen mg/l	28.5	28.5	N/A	26	3	3	19	Fail
BOD, 5 days with Inhibition (Carbonaceous) mg/l	25	25	N/A	26	12	12	61	Fail
pH pH units	9.00	9.00	N/A	26	N/A	N/A	7.53	Pass
Total Oxidised Nitrogen (as N) mg/l	N/A	N/A	N/A	25	N/A	N/A	1.80	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	26	N/A	N/A	4.08	
Copper - unspecified µg/l	N/A	N/A	N/A	2	N/A	N/A	5.96	

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Zinc - unspecified µg/l	N/A	N/A	N/A	2	N/A	N/A	62	
Mercury - unspecified µg/l	N/A	N/A	N/A	2	N/A	N/A	N/A	
Ammonia-Total (as N) mg/l	N/A	N/A	N/A	26	N/A	N/A	10	
Lead - unspecified µg/l	N/A	N/A	N/A	2	N/A	N/A	0.504	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	26	N/A	N/A	4.59	
Di(2-ethylhexyl) phthalate (DEHP) µg/l	N/A	N/A	N/A	2	N/A	N/A	0.066	
PCB 118 µg/l	N/A	N/A	N/A	2	N/A	N/A	N/A	
PCB 28 µg/l	N/A	N/A	N/A	2	N/A	N/A	N/A	
Chromium - unspecified µg/l	N/A	N/A	N/A	2	N/A	N/A	0.775	

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):

cBOD exceeded on 12 occasions, COD on 13 occasions, Suspended Solids on 21 occasions, TN on 3 occasions.

Significance of Results:

The WWTP is non compliant with the ELVs set in the Wastewater Discharge Licence. The impact on receiving waters is assessed further in Section 2.

2.1.4 AMBIENT MONITORING SUMMARY FOR THE COMBINED DISCHARGE TPEFF0500D0057SW001

A summary of monitoring from ambient monitoring points associated with the wastewater discharge is provided in the sections below. For discharges to rivers upstream (U/S) and downstream (D/S) location data is provided. For other ambient points in lakes, coastal or transitional waters, monitoring data from the most appropriate monitoring station is selected.

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

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Ecological Status
Upstream	181358, 62521	CW05003149LE9001	No	No	No	Yes	Good

The results for ambient results and / or additional monitoring data sets are included in the **Appendix 7.1 - Ambient monitoring summary**

Significance of Results:

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.

The ambient monitoring results do not meet the required EQS at the upstream and the downstream monitoring locations. 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.

2.1.5 OPERATIONAL PERFORMANCE SUMMARY - CORK LOWER HARBOUR WWTP

2.1.5.1 Treatment Efficiency Report - Cork Lower Harbour 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	28169	18192	35
COD	2156911	1079086	50
SS	896750	582516	35
TN	136392	75351	45
cBOD	623058	248399	60

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

2.1.5.2 Treatment Capacity Report Summary - Cork Lower Harbour 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.

Cork Lower Harbour WWTP	
Peak Hydraulic Capacity (m ³ /day) - As Constructed	43875
DWF to the Treatment Plant (m ³ /day)	14625
Current Hydraulic Loading - annual max (m ³ /day)	51944

Cork Lower Harbour WWTP	
Average Hydraulic loading to the Treatment Plant (m ³ /day)	11814.58
Organic Capacity (PE) - As Constructed	65000
Organic Capacity (PE) - Collected Load (peak week) ^{Note1}	45602
Organic Capacity (PE) - Remaining	19398
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 - CORK LOWER HARBOUR 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 related to the discharge(s) to water from the WWTP and network is included below.

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
There were no relevant environmental complaints in 2021.			

3.2 REPORTED INCIDENTS SUMMARY

Environmental incidents that arise in an agglomeration are reported on an on-going basis in accordance with our waste water discharge licences. Where an incident occurs and it is reportable under the licence, it is reported to the Environmental Protection Agency through their Environmental Data Exchange Network, or in some instances by telephone. Some incidents which arise in the agglomeration are recorded by Irish Water but may not be reportable under our licence for example where the incident does not have an impact on environmental performance.

A summary of reported incidents is included below.

3.2.1 SUMMARY OF INCIDENTS

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Breach of ELV	WWTP upgrade required to meet ELV	1	Yes	No
Spillage	Adverse Weather	1	No	Yes
Uncontrolled release	Other	1	Yes	Yes

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

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	10
Number of Incidents reported to the EPA via EDEN in 2021	10
Explanation of any discrepancies between the two numbers above	N/A

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
TBC	173315, 62498	No	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	178202, 64724	No	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	TBC, TBC	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	173315, 62497	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	172986, 62329	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
SW008	175796, 64929	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW009	174439, 62605	Yes	Medium	Meeting	Unknown	Unknown	Monitored
SW010	173154, 62416	Yes	Medium	Meeting	Unknown	Unknown	Monitored
SW011	173066, 62347	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW012	178817, 61289	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
SW013	179639, 61145	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	173154, 62416	Yes	Low	Meeting	Unknown	Unknown	Not Monitored

Any TBC SWO(s) were identified as part of the on-going National SWO programme and will be updated in subsequent AER(s) once the information is confirmed.

SWO Summary	
How much sewage was discharged via SWOs in the agglomeration in the year (m3)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	N/A
The SWO Assessment included the requirements of relevant of WWDL schedules?	No
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	Yes

4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS.

4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY

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

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
D0057-SIP:01	SW 02 Ring to meet criteria set out in DoEHLG Procedures and Criteria...	C	01/01/2015	Yes	Works Completed		
D0057-SIP:02	Infiltration programme	C	01/01/2015	Yes	Works Completed		
D0057-SIP:03	Installations of rising mains, gravity sewers, pumping stations and marine pipeline including upgrading of existing facilities	C	01/01/2015	Yes	Works Completed		
D0057-SIP:04	SW 03 Ring to meet criteria set out in DoEHLG Procedures and Criteria...	C	01/01/2015	Yes	Works Completed		
D0057-SIP:05	SW 04 Ring to meet criteria set out in DoEHLG Procedures and Criteria...	C	01/01/2015	Yes	Works Completed		
D0057-SIP:06	SW 05 Ring to meet criteria set out in DoEHLG Procedures and Criteria...	C	01/01/2015	Yes	Works Completed		
D0057-SIP:07	SW 06 Ring to meet criteria set out in DoEHLG Procedures and Criteria...	C	01/01/2015	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
D0057-SIP:08	SW 07 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed		
D0057-SIP:09	WWTP and ancillary works to provide secondary treatment	C	01/01/2015	Yes	Works Completed		

A summary of the status of any other improvements identified by under Condition 5 assessments- is included below.

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description / or any Operational Improvements	Improvement Source	Expected Completion Date	Comments
No additional improvements planned at this time.				

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

The utilisation of multiple capital maintenance programmes and the outputs of the workshops with the Local Authority Operations Staff held under the programme can be used to satisfy the requirements of Condition 5 regarding network integrity. Improvement works identified by way of these programmes and workshops will be included in the Improvements Summary Tables 4.2.1 and 4.2.2.

5 LICENCE SPECIFIC REPORTS

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

Licence Specific Report	Required by licence	Year included in AER	Included in this AER
There is no Licence Specific Report Required in this AER Annual Review.			

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
Does the AER include an Executive Summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Has a Technical amendment/licence review application been submitted to the Agency by IW?	Yes
List reason e.g. additional SWO identified	Alteration to Agglomeration Boundary and proposed new emission limit values.
Is there a need to request/advise the EPA of any modification to the existing WWDL with respect to condition 4 changes to monitoring location, frequency etc	No
List reason e.g. changes to monitoring requirements	N/A
Have these processes commenced?	No
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER	N/A

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

Date: 12/04/2022

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

Katherine Walshe

Acting Head of Environmental Regulation

7 APPENDIX

Appendix

Appendix 7.1 - Ambient monitoring summary

Waterbody	Waterbody	Waterbody	MonitoringStationCode	MonitoringStat	MonitoringSta	MonitoringSta	MonitoringSta	SampleCode	SampleDate	SampleMe	ParameterName	Parameter	ParameterU	Result	TextResult	ResultStrin	LimitOfDete	ReportResult	ReportText	Rei	ReportResi	ReportLimit
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07383	18/05/2021	TrAc Botto Ammonia-Total (as N)	mg/l	milligrams p	0.018	OK	0.018	OK	0.01	0.018	OK	0.01	0.018	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14330	23/08/2021	TrAc Surfa Ammonia-Total (as N)	mg/l	milligrams p	0.068	OK	0.068	OK	0.01	0.068	OK	0.01	0.068	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14331	23/08/2021	TrAc Botto Ammonia-Total (as N)	mg/l	milligrams p	0.029	OK	0.029	OK	0.01	0.029	OK	0.01	0.029	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17711	02/11/2021	TrAc Surfa Ammonia-Total (as N)	mg/l	milligrams p	0.025	OK	0.025	OK	0.01	0.025	OK	0.01	0.025	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto Ammonia-Total (as N)	mg/l	milligrams p	0.017	OK	0.017	OK	0.01	0.017	OK	0.01	0.017	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa Chlorophyll a (Fluorescer	µg/l	Microgramm	4.6	OK	4.6	OK	0.01	4.6	OK	0.01	4.6	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Chlorophyll a (Fluorescer	µg/l	Microgramm	1.4	OK	1.4	OK	0.01	1.4	OK	0.01	1.4	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17711	02/11/2021	TrAc Surfa Chlorophyll a (Fluorescer	µg/l	Microgramm	0.28	OK	0.28	OK	0.01	0.28	OK	0.01	0.28	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto BOD - 5 days (Total)	mg/l	milligrams per litre	<1	OK	1	OK	0.5 <1	<1	OK	1	0.5 <1	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto Depth	m	Metres	26.4	OK	26.4	OK		26.4	OK		26.4	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Depth	m	Metres	0.3	OK	0.3	OK		0.3	OK		0.3	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14330	23/08/2021	TrAc Surfa Depth	m	Metres	0	OK	0	OK		0	OK		0	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14331	23/08/2021	TrAc Botto Depth	m	Metres	NM	OK	NM	OK		NM	OK		NM	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa Ammonia-Total (as N)	mg/l	milligrams p	0.012	OK	0.012	OK	0.01	0.012	OK	0.01	0.012	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto Ammonia-Total (as N)	mg/l	milligrams p	0.043	OK	0.043	OK	0.01	0.043	OK	0.01	0.043	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Ammonia-Total (as N)	mg/l	milligrams p	0.045	OK	0.045	OK	0.01	0.045	OK	0.01	0.045	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07383	18/05/2021	TrAc Botto BOD - 5 days (Total)	mg/l	milligrams per litre	<1	OK	1	OK	0.5 <1	<1	OK	1	0.5 <1	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa BOD - 5 days (Total)	mg/l	milligrams per litre	<1	OK	1	OK	0.5 <1	<1	OK	1	0.5 <1	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14330	23/08/2021	TrAc Surfa BOD - 5 days (Total)	mg/l	milligrams per litre	<1	OK	1	OK	0.5 <1	<1	OK	1	0.5 <1	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14331	23/08/2021	TrAc Botto BOD - 5 days (Total)	mg/l	milligrams per litre	<1	OK	1	OK	0.5 <1	<1	OK	1	0.5 <1	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto Depth	m	Metres	nm	OK	nm	OK		nm	OK		nm	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa Dissolved Oxygen	% Saturati	Percentage !	111	OK	111	OK	1	111	OK	1	111	OK	1	OK	1	1	1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Dissolved Oxygen	% Saturati	Percentage !	105	OK	105	OK	1	105	OK	1	105	OK	1	OK	1	1	1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14331	23/08/2021	TrAc Botto ortho-Phosphate (as P)	- mg/l	milligrams per litre	<0.005	OK	0.005	OK	0.0025 <0.005	<0.005	OK	0.005	0.0025 <0.005	OK	0.005	OK	0.005	0.005	0.005
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto ortho-Phosphate (as P)	- mg/l	milligrams p	0.017	OK	0.017	OK	0.005	0.017	OK	0.005	0.017	OK	0.005	OK	0.005	0.005	0.005
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa pH	pH units	pH Units	8.2	OK	8.2	OK	2	8.2	OK	2	8.2	OK	2	OK	2	2	2
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto pH	pH units	pH Units	7.9	OK	7.9	OK	2	7.9	OK	2	7.9	OK	2	OK	2	2	2
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Pheophytin a	µg/l	Microgramm	0.26	OK	0.26	OK	0.01	0.26	OK	0.01	0.26	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14330	23/08/2021	TrAc Surfa Pheophytin a	µg/l	Microgramm	0.18	OK	0.18	OK	0.01	0.18	OK	0.01	0.18	OK	0.01	OK	0.01	0.01	0.01
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto Salinity	PSU	Practical sali	35	OK	35	OK	0.1	35	OK	0.1	35	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Salinity	PSU	Practical sali	34.5	OK	34.5	OK	0.1	34.5	OK	0.1	34.5	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07383	18/05/2021	TrAc Botto Salinity(Lab)	0/oo	0/oo	34.8	OK	34.8	OK	0.1	34.8	OK	0.1	34.8	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa Salinity(Lab)	0/oo	0/oo	34.3	OK	34.3	OK	0.1	34.3	OK	0.1	34.3	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto Salinity(Lab)	0/oo	0/oo	34.4	OK	34.4	OK	0.1	34.4	OK	0.1	34.4	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17711	02/11/2021	TrAc Surfa Salinity(Lab)	0/oo	0/oo	33.8	OK	33.8	OK	0.1	33.8	OK	0.1	33.8	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto Salinity(Lab)	0/oo	0/oo	34.4	OK	34.4	OK	0.1	34.4	OK	0.1	34.4	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07383	18/05/2021	TrAc Botto Silica (as SiO2)	mg/l	milligrams p	0.12	OK	0.12	OK	0.1	0.12	OK	0.1	0.12	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17711	02/11/2021	TrAc Surfa Silica (as SiO2)	mg/l	milligrams p	0.45	OK	0.45	OK	0.1	0.45	OK	0.1	0.45	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto Silica (as SiO2)	mg/l	milligrams p	0.37	OK	0.37	OK	0.1	0.37	OK	0.1	0.37	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa Depth	m	Metres	0.3	OK	0.3	OK		0.3	OK		0.3	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17711	02/11/2021	TrAc Surfa Depth	m	Metres	0	OK	0	OK		0	OK		0	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto Dissolved Oxygen	% Saturati	Percentage !	99	OK	99	OK	1	99	OK	1	99	OK	1	OK	1	1	1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17711	02/11/2021	TrAc Surfa Dissolved Oxygen	% Saturati	Percentage !	81	OK	81	OK	1	81	OK	1	81	OK	1	OK	1	1	1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07384	18/05/2021	TrAc Surfa Salinity	PSU	Practical sali	34.3	OK	34.3	OK	0.1	34.3	OK	0.1	34.3	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10226	30/06/2021	TrAc Surfa Salinity(Lab)	0/oo	0/oo	33.9	OK	33.9	OK	0.1	33.9	OK	0.1	33.9	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14330	23/08/2021	TrAc Surfa StationDepth	m	Metres	22.3	OK	22.3	OK	0.1	22.3	OK	0.1	22.3	OK	0.1	OK	0.1	0.1	0.1
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-14330	23/08/2021	TrAc Surfa Temperature	Å°C	Degrees cen	15.6	OK	15.6	OK		15.6	OK		15.6	OK		OK			
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-10225	30/06/2021	TrAc Botto TOC (as NPOC)	mg/l	milligrams per litre	<2	OK	2	OK	2	1 <2	OK	2	1 <2	OK	2	OK	2	2	2
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-17712	02/11/2021	TrAc Botto TOC (as NPOC)	mg/l	milligrams per litre	<2	OK	2	OK	2	1 <2	OK	2	1 <2	OK	2	OK	2	2	2
Outer Cork IE_SW_05Coastal	CW05003149LE9001	E630 - Adjacer Operational	Cork County 21-07383	18/05/2021	TrAc Botto Total Oxidised Nitrogen	mg/l	milligrams p															

