Annual Environmental Report 2020



Kinsale

D0132-01

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Rev 1 Note: Section 4.1.1 Question 1 changed to "Unknown". Approved 13/07/2021.

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2020 AER

This Annual Environmental Report has been prepared for D0132-01, Kinsale, 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.

There was no major capital or operational changes undertaken.

1.2 TREATMENT SUMMARY

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

• KINSALE WWTP - 2020 with a Plant Capacity PE of 9800, the treatment type is 3NP - Tertiary N&P removal

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
TPEFF0500D0132SW001	KINSALE WWTP - 2020	Treated	Non-Compliant	Ammonia-Total (as N) mg/l

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 KINSALE WWTP - 2020 - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - KINSALE WWTP - 2020

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	5	132	33
Suspended Solids mg/l	5	244	142.57
COD-Cr mg/l	6	1437	593.02
Hydraulic Capacity	N/A	10310	3995

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 - TPEFF0500D0132SW001

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	32.7	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	8.07	Pass
BOD, 5 days with Inhibition (Carbonaceo mg/I	20	40	N/A	12	N/A	N/A	3.23	Pass
Total Oxidised Nitrogen (as N) mg/l	10	12	N/A	12	N/A	N/A	1.13	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.4	Pass
Ammonia-Total (as N) mg/l	5	6	N/A	12	4	3	3.5	Fail
ortho- Phosphate (as P) - unspecified mg/l	1	1.2	N/A	11	N/A	N/A	0.45	Pass
Enterococci (Intestinal) no./100mls	N/A	N/A	N/A	12	N/A	N/A	8.36	

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)
E. Coli no./100mls	N/A	N/A	N/A	12	N/A	N/A	90.21	
Faecal coliforms no./100mls	N/A	N/A	N/A	12	N/A	N/A	N/A	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	0.59	
Total Nitrogen mg/l	N/A	N/A	N/A	12	N/A	N/A	6.33	

Notes:

Cause of Exceedance(s):

Ammonia did not meet the ELVs set in the WWDL.

Significance of Results:

The WWTP is not compliant with the ELVs set in the WWDL.

^{1 –} This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF0500D0132SW001

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
Downstream	163204, 49049	TW05003167BN2007	No	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 not compliant with the ELV's set in the wastewater discharge licence.

The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

Based on ambient monitoring results a deterioration in BOD, concentrations downstream of the effluent discharge is noted.

A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.

Other causes of deterioration in water quality in the area are unknown.

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 - KINSALE WWTP - 2020

2.1.4.1 Treatment Efficiency Report - KINSALE WWTP - 2020

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)
ТР	N/A	749	N/A
COD	738099	41540	94
cBOD	51432	4102	92
ss	177452	10247	94
TN	N/A	8042	N/A

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

2.1.4.2 Treatment Capacity Report Summary - KINSALE WWTP - 2020

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.

KINSALE WWTP - 2020	
Peak Hydraulic Capacity (m³/day) - As Constructed	6615
DWF to the Treatment Plant (m³/day)	2205
Current Hydraulic Loading - annual max (m³/day)	10310

KINSALE WWTP - 2020			
Average Hydraulic loading to the Treatment Plant (m³/day)	3995		
Organic Capacity (PE) - As Constructed	9800		
Organic Capacity (PE) - Collected Load (peak week)Note1			
Organic Capacity (PE) - Remaining	1023		
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 - KINSALE WWTP - 2020

'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 relevant environmental 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)
Uncontrolled release	Network Infrastructure	1	Yes	No
Breach of ELV	Shock load to the WWTP	1	Yes	No
Other	Plant or equipment breakdown at WWTP	1	No	Yes

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	Plant or equipment maintenance at WWTP	1	No	No
Other	Dosing pump failure or maintenance at WWTP	1	No	No
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	No
Abatement Equipment offline	Plant or equipment maintenance at WWTP	1	No	No
Uncontrolled release	Plant or equipment breakdown at WWTP	1	No	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2020	8
Number of Incidents reported to the EPA via EDEN in 2020	8
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
SW003	164253, 50250	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW2	165479, 49762	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW6	164237, 49704	Yes	Low	Not yet Assessed	Unknown	Unknown	Unknown
твс	164168, 50069	No	Low	Meeting	Meeting Unknown		Not Monitored
твс	163045, 49593	No	Low	Meeting	Unknown	123409	Monitored
твс	164249, 49705	No	Low	Meeting	Unknown	Unknown	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 2020 (No. of events)	Total volume discharged in 2020 (m3)	Monitoring Status	
твс	164234, 49812	No	Medium	Not Meeting	Unknown	Unknown	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?	No
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			
There are no Specified Improvement Programmes for this Agglomeration.										

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 Improven	nents 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	

5.1 PRIORITY SUBSTANCES ASSESSMENT

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

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
Does the AER include an Executive Summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Is there a need to advise the EPA for consideration of a Technical Amendment / Review of the licence?	Yes
List reason e.g. additional SWO identified	Additional SWOs identified
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	Yes

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

Signed: Date: 20/05/2021

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

Ambeint Monitoring Results & Data

			Designations				l i	cBOD	o-Phosphate (as P)	Ammonia (as N)
Ambient monitoring point/Coastal Monitoring Code	Irish Grid Reference	Monitoring point	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status	Results	Results	Results
Upstream Monitoring Point	161854.74, 50048.75	TW05003167BN2006					Moderate	0.62	0.024	0.046
Downstream Monitoring Point	163204.61, 49048.98	TW05003167BN2007	No	No	Yes	No	Moderate	1.033	0.021	0.038
Difference								0.413	-0.003	-0.008
EQS								4	0.04	N/A
% of EQS	·	-						10.325	-7.5	#VALUE!

Upstream Monitoring

Upstream Monitoring														
WaterbodyName	WaterbodyCode	MonitoringStationCode	Monitoring	SampleDate	SampleMe ParameterNa	ParameterU	Parameter Result		TextResult	ResultStri: Lir	nitOfDe Re	portRes ReportTe	x ReportRes R	eportLimit
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Surfa Ammonia-Tot	mg/l	milligrams	0.073		ОК	0.01	0.073	ОК	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Botte Ammonia-Tot	mg/l	milligrams	0.058		ОК	0.01	0.058	ОК	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte Ammonia-Tot		milligrams	0.042		OK	0.01	0.042	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte Ammonia-Tot		milligrams per litre		NM	ОК	0.01		NM	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa BOD - 5 days (milligrams per litre		<1	ОК	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Bottc BOD - 5 days (milligrams per litre		<1	ОК	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Dept BOD - 5 days (milligrams	1.4		OK	1	1.4	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006 TW05003167BN2006			TRaC Surfa Ammonia-Tot TRaC Surfa BOD - 5 days (milligrams	0.038	<1	OK OK	0.01	0.038	OK OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					milligrams per litre	1.7	<1	OK	1	1.7	OK	1
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2006					Microgram Microgram	5.2		OK	1	5.2	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte BOD - 5 days (milligrams per litre	3.2	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006			TRaC Botte Chlorophyll		Microgram	2.7	-1	OK	1	2.7	OK	1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006			TRaC Dept Chlorophyll		Microgram	6.9		OK	1	6.9	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Chlorophyll		Microgrammes per Litre		<1	ОК	1	0.5 <1	ОК	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	29/06/2020	TRaC Surfa Chlorophyll		Microgram	4.2		ОК	1	4.2	ОК	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					Microgram	2		OK	1	2	ОК	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Surfa Depth	m	Metres	0		ОК		0	ОК	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Bottc Depth	m	Metres	5.3		ОК		5.3	ОК	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					Metres	5.4		OK		5.4	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Dissolved Oxy			94		OK	1	94	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Dept Dissolved Oxy			127		OK	1	127	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Dissolved Oxy			106		ОК	1	106	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte Dissolved Oxy			106		ОК	1	106	ОК	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Bottc Dissolved Oxy			97		OK	1	97	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte Dissolved Oxy			93		OK OK	1	93	OK	0.005
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2006 TW05003167BN2006			TRaC Surfa ortho-Phosphi TRaC Surfa ortho-Phosphi		milligrams milligrams	0.043		OK	0.005	0.043	OK OK	0.005
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte ortho-Phosphi		milligrams	0.019		OK	0.005	0.019	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa pH		pH Units	8.1		OK	2	8.1	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa pH		pH Units	8		OK	2	8	OK	2
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006			TRaC Surfa ortho-Phosphi		milligrams per litre	-	NM	ОК	0.005	-	NM	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					Metres	0		ОК		0	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Bottc Silica (as SiO2)	mg/l	milligrams	0.36		OK	0.1	0.36	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	21/07/2020	TRaC Dept Silica (as SiO2)	mg/l	milligrams per litre		<0.1	OK	0.1	0.05 < 0.1	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	10/08/2020	TRaC Bottc Silica (as SiO2)	mg/l	milligrams	0.72		OK	0.1	0.72	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Surfa Salinity(Lab)	0/00	0/00	21.2		OK	0.1	21.2	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					0/00	31.7		OK	0.1	31.7	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa pH		pH Units	7.9		ОК	2	7.9	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					pH Units	7.9		ОК	2	7.9	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					pH Units	8		OK	2	8	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Bottc Temperature		Degrees c∈	9.5		OK		9.5	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Temperature		Degrees ce	14		OK		14 12.5	OK OK	
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2006 TW05003167BN2006			TRaC Botto Temperature TRaC Surfa Temperature		Degrees ce Degrees ce	12.5 16.2		OK OK		16.2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Bottc StationDepth		Metres	6		OK	0.1	6	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte StationDepth		Metres	4.2		OK	0.1	4.2	OK	0.1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006					Practical sa	33.2		OK	0.1	33.2	OK	0.1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006					Practical si	27.7		OK	0.1	27.7	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte Salinity	PSU	Practical sa	32.8		ОК	0.1	32.8	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Dept Salinity	PSU	Practical sa	31.7		OK	0.1	31.7	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	10/08/2020	TRaC Bottc Salinity	PSU	Practical sa	32.3		OK	0.1	32.3	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	10/08/2020	TRaC Surfa Total Oxidised	mg/l	milligrams per litre		NM	OK	0.01		NM	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WI	04/02/2020	TRaC Bottc Salinity(Lab)	0/00	0/00	34		ОК	0.1	34	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					0/00	27.2		OK	0.1	27.2	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006				0/00	0/00	32.4		OK	0.1	32.4	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006					0/00	23.3		ОК	0.1	23.3	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Silica (as SiO2)		milligrams	1.6		OK	0.1	1.6	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Silica (as SiO2)		milligrams	0.43		OK	0.1	0.43	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Botte Silica (as SiO2)		milligrams	0.22		OK OK	0.1	0.22	OK OK	0.1
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006 TW05003167BN2006			TRaC Surfa Silica (as SiO2) TRaC Bottc Total Oxidised		milligrams milligrams	0.14		OK OK	0.1	0.14	OK OK	0.1 0.01
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Dept Total Oxidised	-	0	0.1	<0.01	OK	0.01	0.1	OK	0.01
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2006			TRaC Botte Total Oxidised		milligrams per litre milligrams per litre		<0.01 NM	OK	0.01	0.005 <0.01	NM	0.01
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006			TRaC Surfa StationDepth		Metres	5.9		OK	0.01	5.9	OK	0.01
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006			TRaC Bottc StationDepth		Metres	5.9		OK	0.1	5.9	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006			TRaC Surfa Transparency		Metres	2		OK	0.1	2	OK	V.1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006			TRaC Surfa Transparency		Metres	2.5		OK		2.5	OK	
Lower Bandon Estuary	IE_SW_080_0100				TRaC Surfa Transparency		Metres	1.8		ОК		1.8	OK	
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Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 10/08/2020	TRaC Bottc Transparency	m Me	letres	1.8	OK		1.8	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 21/07/2020	TRaC Dept Temperature	°C De	egrees ce	15.3	OK		15.3	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 04/02/2020	TRaC Surfa Total Oxidised	l mg/l mi	illigrams	1.5	OK	0.01	1.5	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 29/06/2020	TRaC Surfa Total Oxidised	mg/I mi	illigrams	0.33	OK	0.01	0.33	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 21/07/2020	TRaC Dept Ammonia-Tot	mg/I mi	illigrams	0.023	OK	0.01	0.023	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 10/08/2020	TRaC Surfa Ammonia-Tot	mg/l mil	illigrams per litre	NM	OK	0.01		NM	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 10/08/2020	TRaC Surfa BOD - 5 days (mg/I mi	illigrams per litre	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 10/08/2020	TRaC Bottc BOD - 5 days (mg/I mi	illigrams per litre	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 29/06/2020	TRaC Surfa Depth	m Me	letres	0	OK		0	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 29/06/2020	TRaC Bottc Depth	m Me	letres	3.8	OK		3.8	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 21/07/2020	TRaC Dept Depth	m Me	letres	0	OK		0	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 29/06/2020	TRaC Surfa Dissolved Oxy	% Saturation Per	ercentage	100	OK	1	100	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 04/02/2020	TRaC Bottc ortho-Phosphi	mg/l mi	illigrams	0.043	OK	0.005	0.043	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 21/07/2020	TRaC Dept ortho-Phosphi	mg/l mil	illigrams per litre	< 0.005	OK	0.005	0.0025 < 0.005	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 10/08/2020	TRaC Bottc ortho-Phosphi	mg/l mi	illigrams per litre	NM	OK	0.005		NM	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 29/06/2020	TRaC Bottc pH	pH units pH	H Units	8	OK	2	8	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 21/07/2020	TRaC Dept pH	pH units pH	H Units	8.2	OK	2	8.2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 04/02/2020	TRaC Surfa Salinity	PSU Pra	actical sa	20.2	OK	0.1	20.2	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wł 10/08/2020	TRaC Surfa Salinity	PSU Pra	ractical sa	25.8	OK	0.1	25.8	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 21/07/2020	TRaC Dept Salinity(Lab)	0/00 0/0	00	31.6	OK	0.1	31.6	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 04/02/2020	TRaC Surfa StationDepth	m Me	letres	6	OK	0.1	6	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 29/06/2020	TRaC Surfa StationDepth	m Me	letres	4.2	OK	0.1	4.2	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 21/07/2020	TRaC Dept StationDepth	m Me	letres	6.5	OK	0.1	6.5	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 04/02/2020	TRaC Surfa Temperature	°C De	egrees ce	8.2	OK		8.2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - WF 10/08/2020	TRaC Bottc Temperature	°C De	egrees ce	14.9	OK		14.9	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 04/02/2020	TRaC Bottc Total Oxidised	l mg/l mi	illigrams	0.2	OK	0.01	0.2	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 04/02/2020	TRaC Botto Transparency	m Me	letres	2	OK		2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2006	BN080 - Wt 29/06/2020	TRaC Botto Transparency	m Me	letres	2.5	OK		2.5	OK	
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2006	BN080 - WF 21/07/2020	TRaC Dept Transparency	m Me	letres	1.8	OK		1.8	OK	

Downstream Monitoring

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WaterbodyName	WaterbodyCode				SampleM€ ParameterN						ReportRes ReportT		
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007			TRaC Surfa Ammonia-To TRaC Bottc Ammonia-To		milligrams milligrams	0.068	OK OK	0.01	0.068	OK OK	0.01 0.01
	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Ammonia-To		milligrams	0.044	OK OK	0.01	0.044	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Ammonia-To		milligrams	0.025	OK	0.01	0.025	OK	0.01
	IE SW 080 0100	TW05003167BN2007		, . ,	TRaC Surfa Ammonia-To		milligrams	0.025	OK	0.01	0.025	OK	0.01
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007			TRaC Bottc BOD - 5 days		milligrams per litre	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa BOD - 5 days		milligrams per litre	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/11/2020	Grab BOD - 5 days	(mg/l	milligrams	1.4		1	1.4		1
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Ammonia-To		milligrams	0.047	OK	0.01	0.047	OK	0.01
	IE_SW_080_0100	TW05003167BN2007		04/11/2020			milligrams per litre		<0.03		0.0175 < 0.035		0.035
	IE_SW_080_0100	TW05003167BN2007		04/03/2020			milligrams	0.06		0	0.06		
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa BOD - 5 days		milligrams per litre	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa BOD - 5 days		milligrams per litre	<1	OK	1	0.5 <1	OK OK	1
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa BOD - 5 days		milligrams	1.3	OK	1	1.3		
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007		27/05/2020	TRaC Bottc BOD - 5 days Grab BOD - 5 days		milligrams milligrams	1 1.1	ОК	1	1 1.1	ОК	1
	IE_SW_080_0100	TW05003167BN2007		08/07/2020			milligrams	2.9		1	2.9		1
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Chlorophyll	Âμg/I	Microgrammes per Litre		ОК	1	0.5 <1	ОК	1
	IE SW 080 0100	TW05003167BN2007			TRaC Surfa Chlorophyll	Âμg/I	Microgram	1.4	ОК	1	1.4	ОК	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	29/06/2020	TRaC Bottc Chlorophyll	Âμg/I	Microgram	1.5	ОК	1	1.5	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Bottc Chlorophyll	Âμg/I	Microgram	3.3	OK	1	3.3	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc Chlorophyll	Âμg/I	Microgram	3.5	OK	1	3.5	OK	1
	IE_SW_080_0100	TW05003167BN2007			TRaC Botte BOD - 5 days		milligrams per litre	<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020			milligrams	1.7		1	1.7		1
	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Depth	m	Metres	6.1	OK		6.1	OK	
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007			TRaC Surfa Depth TRaC Bottc Depth	m	Metres Metres	0 9.3	OK OK		0 9.3	OK OK	
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Depth	m m	Metres	9.3	OK		9.3	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Chlorophyll	m Âμg/l	Microgrammes per Litre	<1	OK	1	0.5 <1	OK	1
	IF SW 080 0100	TW05003167BN2007			TRaC Surfa Chlorophyll	Âμg/I	Microgram	3.9	OK	1	3.9	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Chlorophyll	Âμg/I	Microgram	2.7	OK	1	2.7	OK	1
	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Depth	m	Metres	9.5	OK		9.5	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	29/06/2020	TRaC Botte Dissolved Ox	y % Saturation	n Percentage	92	ОК	1	92	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/11/2020	Grab Dissolved Ox	y % Saturation	n Percentage	98.2		0	98.2		
	IE_SW_080_0100	TW05003167BN2007		09/12/2020		y: % Saturation		100.6		0	100.6		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		27/05/2020			Number per one hundred		<10	0	5 <10		10
	IE_SW_080_0100	TW05003167BN2007		04/11/2020		no./100mls		299		0	299		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020		lı no./100mls		31		0	31		
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007			TRaC Botto Dissolved Ox			94 0.038	OK OK	0.005	94 0.038	OK OK	0.005
	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007			TRaC Surfa ortho-Phosp TRaC Botto ortho-Phosp		milligrams milligrams	0.038	OK OK	0.005	0.038	OK	0.005
	IE SW 080 0100	TW05003167BN2007			TRaC Surfa Dissolved Ox			109	OK	0.003	109	OK	0.003
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020		y % Saturation		97.8	O.K	0	97.8	Oil	•
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007	BN090 - Kin	27/05/2020		y % Saturation		97.8		0	97.8		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Surfa ortho-Phosp	n mg/l	milligrams per litre	<0	.005 OK	0.005	0.0025 < 0.005	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	10/08/2020	TRaC Surfa ortho-Phosp	n: mg/l	milligrams	0.021	OK	0.005	0.021	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020		no./100mls		52		0	52		
	IE_SW_080_0100	TW05003167BN2007		08/07/2020		lı no./100mls		85		0	85		
	IE_SW_080_0100	TW05003167BN2007		27/05/2020			Number per one hundred		<10	0	5 <10		10
	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007		08/07/2020	Grab Faecal colifo TRaC Surfa Depth	r no./100mls m	Number pi Metres	97 0	OK	0	97 0	OK	
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa pH	m pH units	pH Units	7.9	OK OK	2	7.9	OK	2
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa pH	pH units	pH Units	8.2	OK	2	8.2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte pH	pH units	pH Units	8.1	OK	2	8.1	OK	2
	IE SW 080 0100	TW05003167BN2007		04/03/2020		pH units	pH Units	7.9		2	7.9		2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/11/2020	Grab pH	pH units	pH Units	7.9		2	7.9		2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	29/06/2020	TRaC Surfa Depth	m	Metres	0	OK		0	OK	
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa ortho-Phosp		milligrams	0.019	OK	0.005	0.019	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Salinity	PSU	Practical sa	30.4	OK	0.1	30.4	OK	0.1
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Salinity	PSU	Practical sa	32.7	OK	0.1	32.7	OK	0.1
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007			TRaC Surfa pH TRaC Bottc pH	pH units pH units	pH Units pH Units	8.1	OK OK	2 2	8.1 8	OK OK	2 2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		08/07/2020		pH units	pH Units	8	UK	2	8	OK	2
	IE SW 080 0100	TW05003167BN2007			TRaC Surfa Salinity(Lab)	0/00	0/00	21.1	ОК	0.1	21.1	ОК	0.1
	IE SW 080 0100	TW05003167BN2007			TRaC Surfa Salinity(Lab)	0/00	0/00	32	OK	0.1	32	OK	0.1
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Salinity(Lab)		0/00	25.8	ОК	0.1	25.8	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Dissolved Ox		Percentage	98	ОК	1	98	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Surfa Dissolved Ox	y % Saturation	n Percentage	119	OK	1	119	OK	1
	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Dissolved Ox			103	OK	1	103	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		27/05/2020			Number per one hundred		<10	0	5 <10		10
	IE_SW_080_0100	TW05003167BN2007		04/11/2020		lı no./100mls		318		0	318		
	IE_SW_080_0100 IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007		04/03/2020 04/11/2020		r no./100mls r no./100mls		110 341		0	110 341		
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Salinity	PSU PSU	Practical sa	20	OK	0.1	20	ОК	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Silica (as SiO		milligrams	0.19	OK	0.1	0.19	OK	0.1
	IE SW 080 0100	TW05003167BN2007			TRaC Botte ortho-Phosp		milligrams	0.017	OK	0.005	0.017	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botto ortho-Phosp		milligrams	0.018	OK	0.005	0.018	ОК	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Bottc Salinity(Lab)	0/00	0/00	32.9	ОК	0.1	32.9	ОК	0.1
	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc Salinity(Lab)		0/00	33	OK	0.1	33	OK	0.1
	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc StationDepth		Metres	10	ОК	0.1	10	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Suspended S		milligrams per litre	<4	OK	4	2 <4	OK	4
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		, . ,	TRaC Surfa Suspended S		milligrams per litre	<4	ОК	4	2 <4	ОК	4
Lower Bandon Estuary Lower Bandon Estuary	IE_SW_080_0100 IE_SW_080_0100			08/07/2020	Grab Suspended S TRaC Bottc Silica (as SiO		milligrams milligrams	34 0.34	ок	2.5 0.1	34 0.34	ОК	2.5 0.1
cower bandon cstudiy	344_000_0100	0300310/014200/	DIA- DEONIC	J4/02/2020	ac botti siiica (as SIU.	.,6/1	igrains	0.34	UK.	0.1	0.34	OK.	0.1

Laura Bandan Estudo	IE CW 000 0100	TIMOCO034 C70N3007	DNIOOO IVI-	20/05/2020	TD-C D-M: -II	add coales	-1111-14-	8		04	2		ОК	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007				pH units	pH Units	-		OK	2	8	UK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007 TW05003167BN2007		27/05/2020		pH units	pH Units	8.1		ОК	2	8.1	ок	2
	IE_SW_080_0100				TRaC Surfa Temperature		Degrees c∈	16		UK		16	UK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		09/12/2020			Degrees ce	10.1			0	10.1		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte TOC (as NPO		milligrams per litre		<2	OK	2	1 <2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte TOC (as NPO		milligrams per litre		<2	OK	2	1 <2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc StationDepth		Metres	10		ОК	0.1	10	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa StationDepth		Metres	10		OK	0.1	10	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc StationDepth		Metres	10		ОК	0.1	10	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Salinity	PSU	Practical sa	33.5		OK	0.1	33.5	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Total Oxidise		milligrams	0.066		OK	0.01	0.066	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/11/2020	Grab Total Oxidise	mg/I	milligrams	1.4			0	1.4		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Surfa Temperature	°C	Degrees ce	14.7		OK		14.7	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Botto Temperature	°C	Degrees ce	14.1		OK		14.1	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	08/07/2020	Grab Temperature	°C	Degrees ce	14.8			0	14.8		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/11/2020	Grab Temperature	°C	Degrees ce	10.2			0	10.2		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Transparency	m	Metres	2		ОК		2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Transparency		Metres	2		ОК		2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa True Colour		Milligrammes per litre		<5	OK	5	2.5 <5	OK	5
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc Salinity(Lab)	0/00	0/00	34.3	-5	OK	0.1	34.3	OK	0.1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007			TRaC Surfa Salinity(Lab)		0/00	30.2		OK	0.1	30.2	OK	0.1
Lower Bandon Estuary		TW05003167BN2007			TRaC Botte TOC (as NPO				<2	OK	2	1 <2	OK	2
	IE_SW_080_0100						milligrams per litre		<2					
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Silica (as SiO2		milligrams	0.56		OK	0.1	0.56	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Silica (as SiO2		milligrams per litre		<0.1	ОК	0.1	0.05 < 0.1	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Silica (as SiO2		milligrams per litre		<0.1	ОК	0.1	0.05 < 0.1	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	10/08/2020	TRaC Botte Silica (as SiO2] mg/l	milligrams	0.5		OK	0.1	0.5	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Surfa Total Oxidise	l mg/l	milligrams per litre		< 0.01	OK	0.01	0.005 < 0.01	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	10/08/2020	TRaC Surfa Total Oxidise	l mg/l	milligrams	0.25		OK	0.01	0.25	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	27/05/2020	Grab Total Oxidise	mg/l	milligrams	0.25			0	0.25		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	08/07/2020	Grab Total Oxidise	d mg/l	milligrams	0.13			0	0.13		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa StationDepth		Metres	6.5		OK	0.1	6.5	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa StationDepth		Metres	10		ОК	0.1	10	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Suspended So		milligrams per litre		<4	ОК	4	2 <4	OK	4
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		27/05/2020			milligrams	4		O.K	2.5	4	O.K	2.5
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Transparence		Metres	2.5		ОК	2.5	2.5	ОК	2.3
											5		OK	5
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa True Colour			14		OK	5	14		5
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Temperature		Degrees ce	9.6	_	ОК		9.6	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa TOC (as NPO		milligrams per litre		<2	ОК	2	1 <2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte TOC (as NPO		milligrams per litre		<2	ОК	2	1 <2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa TOC (as NPO		milligrams per litre		<2	OK	2	1 <2	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	10/08/2020	TRaC Surfa TOC (as NPO	mg/I	milligrams	2.4		OK	2	2.4	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/03/2020	Grab Total Nitroge	r mg/l	milligrams	2.1			0	2.1		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/02/2020	TRaC Surfa Total Oxidise	l mg/l	milligrams	1.5		OK	0.01	1.5	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/02/2020	TRaC Botte Total Oxidise	d mg/l	milligrams	0.17		ОК	0.01	0.17	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020			milligrams	2.24			0	2.24		
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007			TRaC Surfa Transparency	m	Metres	2.5		ОК		2.5	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Transparency		Metres	2		OK		2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Transparency		Metres	1.8		ОК		1.8	OK	
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007			TRaC Botte Transparency		Metres	1.8		OK		1.8	OK	
Lower Bandon Estuary											5			
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa True Colour				<5	OK		2.5 <5	OK	5
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Ammonia-To		milligrams	0.048		ОК	0.01	0.048	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Ammonia-To		milligrams	0.028		ОК	0.01	0.028	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		27/05/2020			milligrams	0.05			0	0.05		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		08/07/2020			milligrams per litre			<0.035	0	0.0175 < 0.035		0.035
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc BOD - 5 days	(mg/l	milligrams per litre		<1	OK	1	0.5 <1	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	29/06/2020	TRaC Botte Depth	m	Metres	9.6		OK		9.6	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/02/2020	TRaC Surfa Dissolved Oxy	% Saturation	n Percentage	94		OK	1	94	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Botte Dissolved Oxy	% Saturation	n Percentage	111		OK	1	111	OK	1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	08/07/2020	Grab Dissolved Oxy	% Saturation	n Percentage	101			0	101		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	08/07/2020	Grab E. Coli	no./100mls	Number pe	148			0	148		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	29/06/2020	TRaC Bottc ortho-Phosph	i mg/l	milligrams	0.0095		ОК	0.005	0.0095	OK	0.005
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	04/02/2020	TRaC Bottc pH	pH units	pH Units	8		ОК	2	8	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa pH	pH units	pH Units	8.1		ОК	2	8.1	OK	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc Salinity	PSU	Practical sa	33.2		ОК	0.1	33.2	ОК	0.1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007			TRaC Bottc Salinity	PSU	Practical sa	33.6		ОК	0.1	33.6	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Salinity	PSU	Practical sa	27.2		OK	0.1	27.2	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Salinity	PSU	Practical sa	33.4		ОК	0.1	33.4	OK	0.1
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007			TRaC Botte Salinity(Lab)	0/00	0/00	33		OK	0.1	33	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Silica (as SiO2		milligrams	1.6		OK	0.1	1.6	OK	0.1
		TW05003167BN2007					milligrams per litre		<0.1	OK	0.1	0.05 < 0.1	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100				TRaC Surfa Silica (as SiO2				V0.1					
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Bottc StationDepth		Metres	6.5		OK	0.1	6.5	OK	0.1
	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa StationDepth		Metres	10		OK	0.1	10	OK	0.1
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa Suspended So		milligrams per litre		<4	ОК	4	2 <4	OK	4
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020			milligrams	9			2.5	9		2.5
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/11/2020			milligrams	54			2.5	54		2.5
Lower Bandon Estuary	IE_SW_080_0100				TRaC Surfa Temperature		Degrees c€	8.1		ОК		8.1	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	29/06/2020	TRaC Surfa Temperature	A°C	Degrees c€	13.6		ОК		13.6	OK	
Lower Bandon Estuary	IE_SW_080_0100				TRaC Botto Temperature		Degrees c€	12.3		ОК		12.3	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	10/08/2020	TRaC Botto Temperature		Degrees ce	14.2		OK		14.2	OK	
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/03/2020		°C	Degrees ce	8.3			0	8.3		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		27/05/2020			Degrees ce	14.8			0	14.8		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Surfa TOC (as NPO		milligrams per litre		<2	ОК	2	1 <2	ОК	2
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		27/05/2020			milligrams	0.6			0	0.6	-	=
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		08/07/2020			milligrams	0.8			0	0.8		
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007		04/11/2020			milligrams	1.6			0	1.6		
Lower Bandon Estuary	IE SW 080 0100	TW05003167BN2007		09/12/2020			milligrams	0.9			0	0.9		
Lower Bandon Estuary	IE_SW_080_0100				TRaC Surfa Total Oxidise		milligrams			OF			OV	0.01
		TW05003167BN2007 TW05003167BN2007						0.12		OK	0.01	0.12	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100				TRaC Botte Total Oxidise		milligrams per litro	0.07	<0.01	OK	0.01	0.07	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007			TRaC Botte Total Oxidise		milligrams per litre		<0.01	OK	0.01	0.005 < 0.01	OK	0.01
Lower Bandon Estuary	IE_SW_080_0100	TW05003167BN2007	BN090 - Kin	21/07/2020	TRaC Botto Transparency	m	Metres	2		OK		2	OK	