Annual Environmental Report

2019

Kinsale

D0132-01

CONTENTS

7.1 AMBIENT MONITORING SUMMARY

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2019 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 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	Treated	Non-Compliant	Ammonia-Total (as N) mg/l ortho-Phosphate (as P) - unspecified 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 - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - KINSALE 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	4	1489	343.63
Suspended Solids mg/l	4	284	107.69
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	4	183	62.31
Hydraulic Capacity	N/A	11820	3905

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	42.95	Pass
Suspended Solids mg/l	35	87.5	N/A	12	1	N/A	15.55	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	20	40	N/A	12	N/A	N/A	4.66	Pass
Total Oxidised Nitrogen (as N) mg/l	10	12	N/A	12	N/A	N/A	0.9	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.52	Pass
Ammonia-Total (as N) mg/l	5	6	N/A	12	4	4	5.59	Fail
ortho-Phosphate (as P) - unspecified mg/l	1	1.2	N/A	12	3	3	0.67	Fail
Total Nitrogen mg/l	N/A	N/A	N/A	12	N/A	N/A	10.29	
Enterococci (Intestinal) no./100mls	N/A	N/A	N/A	12	N/A	N/A	330.36	

Faecal coliforms no./100mls	N/A	N/A	N/A	12	N/A	N/A	1473.86	
E. Coli no./100mls	N/A	N/A	N/A	12	N/A	N/A	840.97	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	0.89	

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):

Ammonia and Ortho P did not meet the ELVs set in the WWDL. Influent COD loadings were over design during the month which has an impact on the treatment plant.

Significance of Results:

The WWTP is not compliant with the ELVs set in the WWDL. Influent COD loadings were over design during the month which has an impact on the treatment plant.

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
Upstream	161854.74, 50048.75	TW05003167BN2006	No	No	No	Yes	Moderate
Downstream	163204.61, 49048.98	TW05003167BN2007	No	No	No	Yes	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 does not 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 Ammonia 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.

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

2.1.4.1 Treatment Efficiency Report - KINSALE 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	N/A	1066	N/A

cBOD	119352	5565	95
SS	206269	18583	91
TN	N/A	12299	N/A
COD	658165	51344	92

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

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	
Peak Hydraulic Capacity (m^3/day) - As Constructed	6615
DWF to the Treatment Plant (m^3/day)	2205
Current Hydraulic Loading - annual max (m^3/day)	11820
Average Hydraulic loading to the Treatment Plant (m^3/day)	3905
Organic Capacity (PE) - As Constructed	9800
Organic Capacity (PE) - Collected Load (peak week)[Note1]	8263
Organic Capacity (PE) - Remaining	1537
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

'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)
Industrial / Commercial Sludge	30	Volume (m3)		100	Yes	Yes	No
Industrial / Commercial Sludge	30	Volume (m3)		100	Yes	Yes	No
Industrial / Commercial Sludge	30	Volume (m3)		100	Yes	Yes	No
Industrial / Commercial Sludge	30	Volume (m3)		100	Yes	Yes	No
Industrial / Commercial Sludge	30	Volume (m3)		100	Yes	Yes	No

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 2019.			

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)
Abatement Equipment offline	**Plant or equipment maintenance at WWTP**	**1**	**No**	**Yes**
Uncontrolled release	EO caused by pump failure	1	No	Yes
Breach of ELV	Shock load to the WWTP	1	Yes	No

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Abatement Equipment offline	**Plant or equipment maintenance at WWTP**	**1**	**No**	**Yes**
Uncontrolled release	EO caused by power failure	1	No	Yes
Breach of ELV	Other	1	No	No
Uncontrolled release	Network Infrastructure	1	Yes	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2019	6
Number of Incidents reported to the EPA via EDEN in 2019	6
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
TBC	163040, 49563	No	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	TBC	No	Low	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	TBC	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
SW2	165485, 49081	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW3	164236, 50240	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	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 2019 (No. of events)	Total volume discharged in 2019 (m3)	Monitoring Status
TBC	TBC	No	Unknown	Not yet Assessed	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
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 Improvements Programme for this Agglomeration.				

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

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

5 LICENCE SPECIFIC REPORTS

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

5.a Licence Specific Reports Summary Table

Licence Specific Report	Required by licence	Year included in AER	Included in this AER	Reference to relevant section of AER
Priority Substances Assessment	Yes	2015	No	

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: 23/04/2020

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

			Receiving Waters Designation (Yes/No)					Mean (mg/l)		
Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish National Grid Reference (Easting, Northing)	EPA Feature Coding Tool code	Bathing Water	Drinking Water	FWPM	Shellfish	Current WFD Status	cBOD	o-Phosphate (as P)	Ammonia (as N)
Upstream Monitoring Point	161854.74, 50048.75	TW05003167BN2006					Moderate	0.700	0.018	0.050
Downstream Monitoring Point	163204.61, 49048.98	TW05003167BN2007	No	No	Yes	No	Moderate	1.177	0.019	0.087
Difference								0.477	0.001	0.037
EQS								4.000	0.040	N/A
% of EQS								11.925%	2.500%	#VALUE!

Upstream Monitorign Location

WaterbodyNa	WaterbodyCo	MonitoringStationCode	MonitoringSt	SampleDate	SampleMeth	ParameterNa	ParameterUn	Result	TextResult	LimitOfDetec	ReportResult	ReportTextRe	ReportResult	ReportLimit
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	Ammonia-To	mg/l	0.043		0.01	0.043		OK	0.01
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	Ammonia-To	mg/l	0.043		0.01	0.043		OK	0.01
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	Ammonia-To	mg/l	0.066		0.01	0.066		OK	0.01
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	Ammonia-To	mg/l	0.065		0.01	0.065		OK	0.01
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	Ammonia-To	mg/l	0.047		0.01	0.047		OK	0.01
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	Ammonia-To	mg/l	0.04		0.01	0.04		OK	0.01
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	BOD - 5 days	mg/l		<1	1	0.5	<1	OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	BOD - 5 days	mg/l		<1	1	0.5	<1	OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	BOD - 5 days	mg/l		<1	1	0.5	<1	OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	BOD - 5 days	mg/l	1.3		1	1.3		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	Chlorophyll	µg/l		<1	1	0.5	<1	OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	Chlorophyll	µg/l		<1	1	0.5	<1	OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	Chlorophyll	µg/l	3.5		1	3.5		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	Chlorophyll	µg/l	6.9		1	6.9		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	Chlorophyll	µg/l	5.9		1	5.9		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	Chlorophyll	µg/l	5.2		1	5.2		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	Depth	m	0			0		OK	
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	Depth	m	6.8			6.8		OK	
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	Depth	m	4.7			4.7		OK	
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	Depth	m	0			0		OK	
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	Depth	m	4.8			4.8		OK	
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	Depth	m	0			0		OK	
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	Dissolved Ox	% Saturation	98		1	98		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	Dissolved Ox	% Saturation	92		1	92		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	Dissolved Ox	% Saturation	91		1	91		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	Dissolved Ox	% Saturation	90		1	90		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	Dissolved Ox	% Saturation	106		1	106		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	Dissolved Ox	% Saturation	104		1	104		OK	1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	ortho-Phospl	mg/l	0.024		0.005	0.024		OK	0.005
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	ortho-Phospl	mg/l	0.025		0.005	0.025		OK	0.005
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	ortho-Phospl	mg/l	0.024		0.005	0.024		OK	0.005
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	ortho-Phospl	mg/l	0.02		0.005	0.02		OK	0.005
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	ortho-Phospl	mg/l	0.0088		0.005	0.0088		OK	0.005
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	ortho-Phospl	mg/l	0.012		0.005	0.012		OK	0.005
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	pH	pH units	7.9		2	7.9		OK	2
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	pH	pH units	7.8		2	7.8		OK	2
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	pH	pH units	7.9		2	7.9		OK	2
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	pH	pH units	8		2	8		OK	2
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	pH	pH units	8.2		2	8.2		OK	2
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	pH	pH units	8.1		2	8.1		OK	2
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	Salinity	PSU	15.3		0.1	15.3		OK	0.1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Bottom	Salinity	PSU	33.1		0.1	33.1		OK	0.1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Surface	Salinity	PSU	25.2		0.1	25.2		OK	0.1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC Bottom	Salinity	PSU	26.5		0.1	26.5		OK	0.1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Surface	Salinity	PSU	30.3		0.1	30.3		OK	0.1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC Bottom	Salinity	PSU	31.7		0.1	31.7		OK	0.1
Lower Bando	IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC Surface	Salinity(Lab)	0/oo	13.8		0.1	13.8		OK	0.1

Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Bottom	Salinity(Lab)	0/oo	32.1		0.1	32.1	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Surface	Salinity(Lab)	0/oo	24.8		0.1	24.8	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Bottom	Salinity(Lab)	0/oo	26.1		0.1	26.1	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Surface	Salinity(Lab)	0/oo	30.6		0.1	30.6	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Bottom	Salinity(Lab)	0/oo	31.8		0.1	31.8	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Bottom	Silica (as SiO2	mg/l	0.5		0.1	0.5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Surface	Silica (as SiO2	mg/l	2.3		0.1	2.3	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Bottom	Silica (as SiO2	mg/l	0.89		0.1	0.89	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Surface	Silica (as SiO2	mg/l	0.99		0.1	0.99	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Bottom	Silica (as SiO2	mg/l		<0.1	0.1	0.05	<0.1 OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Surface	Silica (as SiO2	mg/l		<0.1	0.1	0.05	<0.1 OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Surface	StationDepth	m	7.5		0.1	7.5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Bottom	StationDepth	m	7.5		0.1	7.5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Surface	StationDepth	m	5		0.1	5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Bottom	StationDepth	m	5		0.1	5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Bottom	StationDepth	m	5		0.1	5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Surface	StationDepth	m	5		0.1	5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Bottom	Temperature	°C	10			10	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Surface	Temperature	°C	10.5			10.5	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Surface	Temperature	°C	15.3			15.3	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Bottom	Temperature	°C	14.8			14.8	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Bottom	Temperature	°C	15.8			15.8	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Surface	Temperature	°C	16			16	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Surface	Total Oxidise(	mg/l	2.6		0.01	2.6	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Bottom	Total Oxidise(	mg/l	0.38		0.01	0.38	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Bottom	Total Oxidise(	mg/l	0.39		0.01	0.39	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Surface	Total Oxidise(	mg/l	0.44		0.01	0.44	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Surface	Total Oxidise(	mg/l	0.12		0.01	0.12	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Bottom	Total Oxidise(	mg/l	0.08		0.01	0.08	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Surface	Transparency	m	2			2	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	28/02/2019 12:11	TRaC	Bottom	Transparency	m	2			2	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Bottom	Transparency	m	0.7			0.7	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/08/2019 11:15	TRaC	Surface	Transparency	m	0.7			0.7	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Bottom	Transparency	m	2.9			2.9	OK	
Lower Bando IE_SW_080_(	TW05003167BN2006	BN080 - Whit	19/09/2019 11:31	TRaC	Surface	Transparency	m	2.9			2.9	OK	

Downstream Monitoring Location

WaterbodyNa	WaterbodyCo	MonitoringStationCode	MonitoringSt	SampleDate	SampleMeth	ParameterNa	ParameterUn	Result	TextResult	LimitOfDetec	ReportResult	ReportTextRe	ReportResult	ReportLimit
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Ammonia-To	mg/l	0.034		0.01	0.034	OK		0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Ammonia-To	mg/l	0.033		0.01	0.033	OK		0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab		Ammonia-To	mg/l	0.05		0	0.05			
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab		Ammonia-To	mg/l	0.51		0	0.51			
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab		Ammonia-To	mg/l	0.059		0	0.059			
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Ammonia-To	mg/l	0.047		0.01	0.047	OK		0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Ammonia-To	mg/l	0.048		0.01	0.048	OK		0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Ammonia-To	mg/l	0.065		0.01	0.065	OK		0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Ammonia-To	mg/l	0.062		0.01	0.062	OK		0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Ammonia-To	mg/l	0.081		0.01	0.081	OK		0.01

Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Surface	Ammonia-To	mg/l	0.043		0.01	0.043		OK		0.01
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Bottom	Ammonia-To	mg/l	0.089		0.01	0.089		OK		0.01
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	20/11/2019	10:20	Grab	Ammonia-To	mg/l			0	0.0175	<0.035			0.035
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Surface	BOD - 5 days	mg/l		<1	1	0.5	<1	OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Bottom	BOD - 5 days	mg/l		<1	1	0.5	<1	OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	06/03/2019	12:15	Grab	BOD - 5 days	mg/l	1.8		1	1.8				1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	15/05/2019	09:25	Grab	BOD - 5 days	mg/l	2.5		1	2.5				1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	03/07/2019	13:00	Grab	BOD - 5 days	mg/l	2		1	2				1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Surface	BOD - 5 days	mg/l		<1	1	0.5	<1	OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Surface	BOD - 5 days	mg/l		<1	1	0.5	<1	OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Bottom	BOD - 5 days	mg/l	1.2		1	1.2		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	09/10/2019	11:00	Grab	BOD - 5 days	mg/l	1.1		1	1.1				1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Surface	Chlorophyll	µg/l		<1	1	0.5	<1	OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Bottom	Chlorophyll	µg/l		<1	1	0.5	<1	OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Surface	Chlorophyll	µg/l	3.1		1	3.1		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Bottom	Chlorophyll	µg/l	2.2		1	2.2		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	14:10	TRaC Depth C	Chlorophyll	µg/l	3.4		1	3.4		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Bottom	Chlorophyll	µg/l	3.4		1	3.4		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Surface	Chlorophyll	µg/l	4.3		1	4.3		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Bottom	Depth	m	8.8			8.8		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Surface	Depth	m	0			0		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	08/07/2019	13:08	TRaC Surface	Depth	m	0			0		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	08/07/2019	13:08	TRaC Bottom	Depth	m	8.5			8.5		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Surface	Depth	m	0			0		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Bottom	Depth	m	5.5			5.5		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	14:10	TRaC Depth C	Depth	m	0			0		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	14:10	TRaC Bottom	Depth	m	4.8			4.8		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Surface	Depth	m	0			0		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Bottom	Depth	m	6.8			6.8		OK		
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Surface	Dissolved Ox	% Saturation	99		1	99		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	28/02/2019	12:29	TRaC Bottom	Dissolved Ox	% Saturation	97		1	97		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	06/03/2019	12:15	Grab	Dissolved Ox	% Saturation	100.1		0	100.1				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	15/05/2019	09:25	Grab	Dissolved Ox	% Saturation	107.1		0	107.1				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	03/07/2019	13:00	Grab	Dissolved Ox	% Saturation	101.5		0	101.5				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	08/07/2019	13:08	TRaC Surface	Dissolved Ox	% Saturation	125		1	125		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	08/07/2019	13:08	TRaC Bottom	Dissolved Ox	% Saturation	113		1	113		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Surface	Dissolved Ox	% Saturation	90		1	90		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	11:36	TRaC Bottom	Dissolved Ox	% Saturation	87		1	87		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	14:10	TRaC Depth C	Dissolved Ox	% Saturation	88		1	88		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/08/2019	14:10	TRaC Bottom	Dissolved Ox	% Saturation	90		1	90		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Surface	Dissolved Ox	% Saturation	104		1	104		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	19/09/2019	11:46	TRaC Bottom	Dissolved Ox	% Saturation	102		1	102		OK		1
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	09/10/2019	11:00	Grab	Dissolved Ox	% Saturation	97.6		0	97.6				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	20/11/2019	10:20	Grab	Dissolved Ox	% Saturation	98.2		0	98.2				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	06/03/2019	12:15	Grab	E. Coli	no./100mls	2282		0	2282				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	15/05/2019	09:25	Grab	E. Coli	no./100mls			0	5	<10			10
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	03/07/2019	13:00	Grab	E. Coli	no./100mls	10		0	10				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	09/10/2019	11:00	Grab	E. Coli	no./100mls	583		0	583				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	06/03/2019	12:15	Grab	Enterococci (I	no./100mls	833		0	833				
Lower Bando	IE_SW_080_(	TW05003167	BN2007	BN090 - Kinsa	15/05/2019	09:25	Grab	Enterococci (I	no./100mls			0	5	<10			10

Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab	Enterococci (I	no./100mls			0	5	<10			10
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	09/10/2019 11:00	Grab	Enterococci (I	no./100mls	109		0	109				
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab	Faecal colifor	no./100mls	3255		0	3255				
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab	Faecal colifor	no./100mls			0	5	<10			10
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab	Faecal colifor	no./100mls	41		0	41				
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	09/10/2019 11:00	Grab	Faecal colifor	no./100mls	538		0	538				
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	ortho-Phospl	mg/l		0.018	0.005	0.018		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	ortho-Phospl	mg/l		0.023	0.005	0.023		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	ortho-Phospl	mg/l		0.007	0.005	0.007		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	ortho-Phospl	mg/l		0.006	0.005	0.006		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	ortho-Phospl	mg/l		0.016	0.005	0.016		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	ortho-Phospl	mg/l		0.012	0.005	0.012		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	ortho-Phospl	mg/l		0.023	0.005	0.023		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	ortho-Phospl	mg/l		0.064	0.005	0.064		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	ortho-Phospl	mg/l		0.0091	0.005	0.0091		OK	0.005
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	pH	pH units		7.9	2	7.9		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	pH	pH units		7.9	2	7.9		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab		pH	pH units		7.9	2	7.9			2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab		pH	pH units		8.3	2	8.3			2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab		pH	pH units		8.1	2	8.1			2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	pH	pH units		8.3	2	8.3		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	pH	pH units		8.3	2	8.3		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	pH	pH units		8	2	8		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	pH	pH units		8	2	8		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	pH	pH units		8	2	8		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	pH	pH units		8.2	2	8.2		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	pH	pH units		8.1	2	8.1		OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	09/10/2019 11:00	Grab		pH	pH units		7.9	2	7.9			2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Salinity	PSU		33.4	0.1	33.4		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Salinity	PSU		14.3	0.1	14.3		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Salinity	PSU		32.8	0.1	32.8		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Salinity	PSU		31.5	0.1	31.5		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Salinity	PSU		28	0.1	28		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Salinity	PSU		30.6	0.1	30.6		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Bottom	Salinity	PSU		28	0.1	28		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Salinity	PSU		21	0.1	21		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Salinity	PSU		31.5	0.1	31.5		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	Salinity	PSU		33	0.1	33		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Salinity(Lab)	0/oo		33.3	0.1	33.3		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Salinity(Lab)	0/oo		14.3	0.1	14.3		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Salinity(Lab)	0/oo		32.6	0.1	32.6		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Salinity(Lab)	0/oo		31.7	0.1	31.7		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Salinity(Lab)	0/oo		30	0.1	30		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Salinity(Lab)	0/oo		27.8	0.1	27.8		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Salinity(Lab)	0/oo		24.2	0.1	24.2		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Salinity(Lab)	0/oo		31.7	0.1	31.7		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	Salinity(Lab)	0/oo		32.8	0.1	32.8		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Silica (as SiO2	mg/l		2.2	0.1	2.2		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Silica (as SiO2	mg/l		0.43	0.1	0.43		OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Silica (as SiO2	mg/l	<0.1		0.1	0.05	<0.1	OK	0.1

Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Silica (as SiO2	mg/l		<0.1		0.1	0.05 <0.1	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Silica (as SiO2	mg/l	0.73			0.1	0.73	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Silica (as SiO2	mg/l	0.54			0.1	0.54	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Silica (as SiO2	mg/l	1.1			0.1	1.1	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Silica (as SiO2	mg/l		<0.1		0.1	0.05 <0.1	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	Silica (as SiO2	mg/l		<0.1		0.1	0.05 <0.1	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	StationDepth	m	9			0.1	9	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	StationDepth	m	9			0.1	9	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	StationDepth	m	9			0.1	9	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	StationDepth	m	9			0.1	9	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	StationDepth	m	6			0.1	6	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	StationDepth	m	6			0.1	6	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	StationDepth	m	5			0.1	5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Bottom	StationDepth	m	5			0.1	5	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	StationDepth	m	7			0.1	7	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	StationDepth	m	7			0.1	7	OK	0.1
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Suspended Sc	mg/l		<13		4	6.5 <13	OK	13
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab		Suspended Sc	mg/l	40			2.5	40		2.5
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab		Suspended Sc	mg/l	15			2.5	15		2.5
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab		Suspended Sc	mg/l	25			2.5	25		2.5
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Suspended Sc	mg/l	9			4	9	OK	4
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Suspended Sc	mg/l	4			4	4	OK	4
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	09/10/2019 11:00	Grab		Suspended Sc	mg/l	26			2.5	26		2.5
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Temperature	°C	10.7				10.7	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Temperature	°C	10				10	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab		Temperature	°C	8.7			0	8.7		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab		Temperature	°C	13.5			0	13.5		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab		Temperature	°C	17			0	17		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Temperature	°C	16.5				16.5	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Temperature	°C	17.4				17.4	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Temperature	°C	15				15	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Temperature	°C	14.1				14.1	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Temperature	°C	16.3				16.3	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Bottom	Temperature	°C	14.7				14.7	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Temperature	°C	15.8				15.8	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	Temperature	°C	15.7				15.7	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	09/10/2019 11:00	Grab		Temperature	°C	12.8			0	12.8		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	20/11/2019 10:20	Grab		Temperature	°C	9.5			0	9.5		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	TOC (as NPO(	mg/l		<2		2	1 <2	OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	TOC (as NPO(	mg/l		<2		2	1 <2	OK	2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab		Total Nitroge	mg/l	4.5			0	4.5		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab		Total Nitroge	mg/l	1			0	1		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab		Total Nitroge	mg/l	0.72			0	0.72		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	20/11/2019 10:20	Grab		Total Nitroge	mg/l	1.57			0	1.57		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Total Oxidise(	mg/l	1.6			0.01	1.6	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Total Oxidise(	mg/l	0.31			0.01	0.31	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	06/03/2019 12:15	Grab		Total Oxidise(	mg/l	2.3			0	2.3		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	15/05/2019 09:25	Grab		Total Oxidise(	mg/l				0	0.1 <0.20		0.2
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	03/07/2019 13:00	Grab		Total Oxidise(	mg/l	0.07			0	0.07		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Total Oxidise(	mg/l	0.019			0.01	0.019	OK	0.01

Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Total Oxidise	mg/l		0.01	0.01	0.01	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Total Oxidise	mg/l		0.21	0.01	0.21	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Total Oxidise	mg/l		0.31	0.01	0.31	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Total Oxidise	mg/l		0.48	0.01	0.48	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Total Oxidise	mg/l		0.082	0.01	0.082	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	Total Oxidise	mg/l		0.054	0.01	0.054	OK	0.01
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	20/11/2019 10:20	Grab		Total Oxidise	mg/l		1.34	0	1.34		
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Bottom	Transparency	m		2.1		2.1	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	Transparency	m		2.1		2.1	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Bottom	Transparency	m		2.3		2.3	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	08/07/2019 13:08	TRaC	Surface	Transparency	m		2.3		2.3	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Bottom	Transparency	m		0.9		0.9	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	Transparency	m		0.9		0.9	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Bottom	Transparency	m		0.9		0.9	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 14:10	TRaC	Depth C	Transparency	m		0.9		0.9	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	Transparency	m		3.1		3.1	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Bottom	Transparency	m		3.1		3.1	OK	
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	28/02/2019 12:29	TRaC	Surface	True Colour	mg/litre Pt Co		22	5	22	OK	5
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/08/2019 11:36	TRaC	Surface	True Colour	mg/litre Pt Co		7	5	7	OK	5
Lower Bando IE_SW_080_(	TW05003167BN2007	BN090 - Kinsa	19/09/2019 11:46	TRaC	Surface	True Colour	mg/litre Pt Co		6	5	6	OK	5