Annual Environmental Report





Killamey

D0037-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2020 AER

This Annual Environmental Report has been prepared for D0037-01, Killarney, in Kerry in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified reports where relevant are included as an appendix to the AER.

1.1 ANNUAL STATEMENT OF MEASURES

A summary of any improvements undertaken is provided where applicable.

1.2 TREATMENT SUMMARY

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

• KILLARNEY WWTP - 2020 with a Plant Capacity PE of 54000, 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	
TPEFF1300D0037SW001	KILLARNEY WWTP - 2020	Treated	Compliant	N/A	

1.4 LICENCE SPECIFIC REPORTING INCLUDED IN AER

Assessment / Report

Included in AER

There are no Licence Specific Reports included in the AER.

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 KILLARNEY WWTP - 2020 - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - KILLARNEY 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 (Carbonaceous BOD) mg/I	24	255	97.29
Total Phosphorus (as P) mg/l	24	5.94	2.64
Total Nitrogen mg/l	24	65.37	22.39
COD-Cr mg/l	24	641	232.02
Suspended Solids mg/l	24	369	127.4
Hydraulic Capacity	N/A	22496	11480

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 less than the peak Treatment Plant Capacity. Further details on the plant capacity and efficiency can be found under the section 'Operational Performance Summary'. The design of the wastewater tretament plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF1300D0037SW001

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	24	N/A	N/A	18.74	Pass
Suspended Solids mg/l	35	87.5	N/A	24	N/A	N/A	7.09	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	24	N/A	N/A	2.98	Pass
Ammonia-Total (as N) mg/l	10	20	N/A	24	N/A	N/A	0.24	Pass
pH pH units	9	9	N/A	24	N/A	N/A	7.14	Pass
Total Phosphorus (as P) mg/l	1	1.2	N/A	24	N/A	N/A	0.12	Pass
ortho-Phosphate (as P) - unspecified mg/l	0.8	1.6	N/A	24	N/A	N/A	0.05	Pass
Conductivity @20°C μS/cm	N/A	N/A	N/A	23	N/A	N/A	343.32	
Total Nitrogen mg/l	N/A	N/A	N/A	24	N/A	N/A	2.66	

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)
Visual Inspection Descriptive	N/A	N/A	N/A	24	N/A	N/A	N/A	

Notes:

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

Cause of Exceedance(s):

Not applicable

Significance of Results:

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

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF1300D0037SW001

Attached as an appendix to this report.

Significance of Results:

The WWTP discharge was 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.

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

The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - KILLARNEY WWTP - 2020

2.1.4.1 Treatment Efficiency Report - KILLARNEY 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)
COD	1037794	83816	92
ТР	11811	531	96
SS	569867	31731	94
cBOD	435186	13322	97
TN	100149	11881	88

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

2.1.4.2 Treatment Capacity Report Summary - KILLARNEY 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.

KILLARNEY WWTP - 2020			
Peak Hydraulic Capacity (m³/day) - As Constructed	28350		
DWF to the Treatment Plant (m³/day)			
Current Hydraulic Loading - annual max (m³/day)	22496		

KILLARNEY WWTP - 2020			
Average Hydraulic loading to the Treatment Plant (m³/day)	11480		
Organic Capacity (PE) - As Constructed			
Organic Capacity (PE) - Collected Load (peak week) ^{Note1}			
Organic Capacity (PE) - Remaining			
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 - KILLARNEY 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)
Domestic /Septic Tank Sludge	4273.64	Volume (m3)	0	0.1	Yes	Yes	No
Industrial / Commercial Sludge	4101.83	Volume (m3)	0	0.1	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 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)	
There were no reportable incidents in 2020.					

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2020	0
Number of Incidents reported to the EPA via EDEN in 2020	0
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	lrish 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
SW002	95702, 89930	Yes	High	Meeting	Unknown	Unknown	Unknown
SW003	95735, 89979	Yes	High	Meeting	Unknown	Unknown	Not Monitored
SW004	91517, 92094	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW005	94231, 91547	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW006	97998, 89950	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW007	97277, 88741	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow	lrish 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		
SW008	96627, 89502	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored		
твс	97496, 89541	No	Medium	Meeting	Unknown	Unknown	Not Monitored		

SWO Summary	
How much sewage was discharged via SWOs in the agglomeration in the year (m3)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	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
D0037-SIP:01	Relocation of Primary Discharge, if required	С	31/12/2020	No	Not Started		Capital works not funded in RC3. Capital works funding post 2024 will be contingent on the project being included in the 2025- 2029 investment period.
D0037-SIP:02	SW001 to be discontinued	A	01/01/2021	No	Not Started		Capital works not funded in RC3. Capital works funding post 2024 will be contingent on the project being included in the 2025- 2029 investment period.
D0037-SIP:03	Upgrade of treatment plant, if required	С	31/12/2020	No	Not Started		Capital works not funded in RC3. Capital works funding post 2024 will be contingent on the project being included in the 2025- 2029 investment period.
D0037-SIP:04	Upgrading of Storm Water Overflows to comply with the criteria outlined in the DoECLG "Procedures and Criteria in relation to Storm Water Overflows, 1995"	С	31/12/2020	No	Not Started		Capital works not funded in RC3. Capital works funding post 2024 will be contingent on the project being included in the 2025- 2029 investment period.

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

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

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

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

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

5 LICENCE SPECIFIC REPORTS

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

5.a Licence Specific Reports Summary Table

Licence Specific Report	Required by licence	Year included in AER	Included in this AER	Reference to relevant section of AER
Priority Substances Assessment	Yes	2016	No	

5.1 PRIORITY SUBSTANCES ASSESSMENT

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

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

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

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

Signed: Date: 24/06/2021

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

Ross Bay WWDL Ambient Points

Ambient Monitoring Point from WWDL (or as agreed with	Irish Grid Reference	EPA Feature Coding Tool code	Receiving Waters Desi	gnation (Y/N)			WFD Status
EPA)							
			Bathing Water	Drinking Water	FWPM	Shellfish	
Ross Bay 1_Killarney _DS_DISCH_PT_LAKE_1		LS220020702090080	No	No	No	No	Moderate
Ross Bay 2_Killarney _DS_DISCH_PT_LAKE_2		LS220020702090090	No	No	No	No	Moderate
Ross Bay 3_Killarney_DS_DISCH_PT_LAKE_3		LS220020702090100	No	No	No	No	Moderate

Ambient Impact Assessment Table

Parameter Name	Downstream Monitoring Point 1	Downstream Monitoring Point	Downstream	Downstream	Downstream	Downstream	EQS (95%lle)	%EQS		
	Location	Mean	Location	Monitoring Point 2	Location	Monitoring Point 2				
				Annual Mean		Annual Mean				
cBOD mg/l	LS220020702090080	1.66	LS220020702090090	1.37	LS220020702090100	1.30	1.5	-24.17%		
Ortho-Phosphate (as P) mg/l	LS220020702090080	0.02	LS220020702090090	0.01	LS220020702090100	0.01	0.035	-33.02%		
Ammonia (as N) mg/l	LS220020702090080	0.09	LS220020702090090	0.09	LS220020702090100	0.06	0.065	-53.85%		

									001_COLOUR _SUB	R 005A_TEMP_ FIELD	_ 006_PH	006_PH_SUE	B 007A_COND CTIVITY200	U 007A_COND CTIVITY20C	U 010C_SILIO	CA 013C_B	DD 020K_NITR TE_SUB	A 021K_NITRIT E_SUB	r 022K_AMN NIA	NO 022K_AMM NIA_SUB	D 025_PHOSPI ATE_SRP	H 025_PHOSPH ATE_SRP_SU	026D_TOTAL P	026D_TOTAL P_SUB	033K_TON_S UB	035_DO_PCT _SAT	036_DO_MG_ 0 L	041_CHLORO 04 PHYLL_A P	HYLL_A_SU	052_TOTAL_ NITROGEN	065_ALKALI NITY_SUB	078_SECCHI	079_LAKE_D EPTH	082_VIS_INS PECTION
									True	Tomporature			Conductivity	SUR Conductivity	Cillon SUB		NUTDATE SI	I Nitrito SUR	Ammonia	Ammonia S	II Dhorphonur	Bhornhorur	Phoenhorus	Dhornhorur	TON SUP	Dissolved	Discoluped	chlorophull o	R blorophyll o	Total	ALKALINITY	Transparane	Dopth	Meual
									Colour SUB	remperature	= pn	pn_308	conductivity	Sub			R R	5 Milline_30B	Annona	R R	(MRP)	(MRP) SUB	(Total)	(Total) SUB	1014_305	Oxygen	Oxygen	chilorophyn a Ci	SUR	Nitrogen	SUB	mansparency	Depui	Inspection
											8.0		0						0 10	0 10	0.015	0.015	0 020	0.020		120	12.0	10	10					
									HAZEN	DEG_C	PH	PH	USCM	USCM	MGL_SIO2	BOD	MGL	MGLN	MGLN	MGLN	MGL	MGL	MGLP	MGLP	MGLN	PERCENT_SA	MGL	MGM3	MGM3	MGLN	MGCACO3L	м	м	NONE
Sampled Date	Sampling Point	SP EPA Code	Sample No	o. Sampled Time Samp	pled By Sample	e Type Test List	Comments	Sample Statu	s																									
																																	4	4
09-Jan-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/0088	12:11 AS	LAKE	186_AMBIENT_KILLARNY		Authorised		8.2	7.2		96			<1.3			< 0.05	_	0.01		0.022				11.3		<	1.03	′	+'	<u> </u>	Clear
09-Jan-20 Ross Bay 2	Killarney_DS_DISCH_PT_LAKE_2	LS220020702090090	2020/0087	12:19 AS	LAKE	186_AMBIENT_KILLARNY		Authorised		7.9	12		102	-		1.3		-	<0.05		0.01	-	0.028				11.1		<	1.03	′	+'		Clear
24 Mar 20 Ross Bay 1	Killarney DS DISCH DT LAKE 2	LS220020702090080	2020/0066	12:25 AS	LAKE	100_AMBIENT_KILLARNY		Authorized		0.2	7.2		100			-1.2	_		0.32	_	0.00		0.000				9.4		1	11		+'		Cloar
26-Mar-20 Ross Bay 3	Killarney DS DISCH PT LAKE 2	1 \$220020702090100	2020/0745	12:20 AS	LAKE	186 AMBIENT KILLARNY		Authorised		11.2	7.1		142	-		17	_		<0.05	-	0.01		0.009				11.4		1	16		<u> </u>		Clear
26-Mar-20 Ross Bay 1	Killarney DS DISCH PT LAKE 1	1 \$2200207020700000	2020/0743	12:38 45	LAKE	186 AMBIENT KILLAPNY		Authorised		11.1	7.0		146	-	-	1.6	-		<0.05	-	0.01	-	0.025				11.3		1	17				Clear
03- Jun-20 Ross Bay 2	Killarney DS DISCH PT LAKE 2	1 \$220020702070000	2020/1069	12:30 IMCG	LAKE	186 AMBIENT KILLARNY		Authorised		18.6	7.8		105	-		<1.3	-		<0.05	-	<0.005	-	0.014				10.3			1.03				Clear shallow
03-Jun-20 Ross Bay 1	Killarney DS DISCH PT LAKE 1	LS220020702090080	2020/1068	12:35 IMCG	LAKE	186 AMBIENT KILLARNY		Authorised		19.1	7.9		104			<1.3			< 0.05		< 0.005		0.015				11.0		<	1.03		1		SI murky
																															·'			shallow
03-Jun-20 Ross Bay 2	Killarney _DS_DISCH_PT_LAKE_2	LS220020702090090	2020/1070	12:43 IMCG	LAKE	186_AMBIENT_KILLARNY		Authorised		18.2	7.7		104	_		<1.3			< 0.05		< 0.005		0.012				10.2		<	1.03	/	<u> </u>		Shallow
23-Jul-20 Ross Bay 2	_Killarney _DS_DISCH_PT_LAKE_2	LS220020702090090	2020/6195	12:35 IMCG	LAKE	116_EPA_LAKES	EPA LAKE SAMPLING	Not Authorised	1 23	19.0	_	8.1	_	116	0.97	_	0.23	0.005		<0.02	_	<0.01		0.016	0.24	107.0	9.9	11	1.0		23.0	2.3	2.7	
23-Jul-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/1644	12:35 IMCG	LAKE	186_AMBIENT_KILLARNY		Authorised		19.2	7.8		106			1.3			< 0.05	_	< 0.005		0.013				9.9		<	1.03	′	+'	<u> </u>	SI murky
23-Jul-20 Ross Bay 3	_KIIIarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/1646	12:36 IMCG	LAKE	TI6_CHEORO_UNEY		Authorised								_		-									++'	/1.6			′	+'		
23-Jul-20 Ross Bay 3	Killarney_DS_DISCH_P1_LAKE_3	LS220020702090100	2020/1648	12:41 IMCG	LAKE	116_LAKE_ALGAL_TRAWL	EDA LAKE CAMPLING	Authorised	22	20.0	-		-	12/	0.02	_	0.34	0.014	-	.0.02	-	.0.01		0.021	0.35	100.0	0.0		,		20.0	1.1.2	1.2	-
23-Jul-20 Ross Bay 1	Killarney_DS_DISCH_PT_LAKE_T	LS220020702090080	2020/6193	12:45 IMCG	LAKE	TI6_EPA_LAKES	EPA LAKE SAMPLING	Not Authorised	23	20.8		8.0	100	136	0.83	1.4	0.34	0.014	0.07	<0.02	.0.007	<0.01	0.020	0.031	0.35	109.0	9.9	1.8	.0	or	30.0	>1.2	1.2	Cl. anualau
23-Jul-20 Ross Bay 2	Killamey_DS_DISCH_PT_DAKE_2	L5220020702090090	2020/1643	12:45 IMCG	LAKE	TOO_AMDIENT_KILLARNY		Authorised		21.0	3.0		123	-		1.4		-	0.05		<0.005		0.020				9.9		1	.05		t'	<u> </u>	SI MULKY
23-Jul-20 R055 Bay 1	Killarney_DS_DISCH_PT_DAKE_T	LS220020702090080	2020/1042	12:53 IMCG	LAKE	114 EDA LAVES	EDA LAKE SAMDUNC	Not Authorized	1 22	20.6	1.0	0.1	144	141	0.95	1.0	0.49	0.025	<0.05	0.02	<0.005	-0.01	0.020	0.027	0.51	117.0	10.5	1	2.0	.17	26.0	-04	0.6	- MULIKY
18-Aug-20 Ross Bay 3	Killarney DS DISCH_PT_DAKE_3	1 \$220020702090100	2020/6197	12:30 45	LAKE	116_EPA_DAKES	EPA LAKE SAMPLING	Not Authorised	42	20.4	-	7.2	-	122	1 30	-	0.40	0.033		0.05	-	0.01		0.043	0.23	92.0	83	8	5		32.0	2.6	3.1	-
18-Aug-20 Ross Bay 2	Killarney DS DISCH PT LAKE 3	L \$220020702090090	2020/0190	12:30 AS	LAKE	116_CHLORO_ONLY	EPA DAKE SAMPEING	Authorised	42	20.2	-	1.2	-	122	1.30	-	0.21	0.022		0.15	-	0.01	0.041	0.043	0.23	92.0	0.3	5.6			32.0	2.0	3.1	-
18-Aug-20 Ross Bay 3	Killarney DS DISCH PT LAKE 3	1 \$220020702090100	2020/1002	12:30 45	LAKE	116 LAKE ALCAL TRAWL		Not Authorised		-	-		-	-	-	-	-		-	-	-	-	0.041											
18-Aug-20 Ross Bay 3	Killarney DS DISCH PT LAKE 3	LS220020702090100	2020/6198	12:30 AS	LAKE	116 EPA LAKES	EPA LAKE SAMPLING	Not Authorised	40	20.5	-	72	-	120	1.30	-	< 0.20	0.019		0.11	-	<0.01		0.043	0.20	93.0	8.4	11	5.0		29.0	>17	17	-
18-Aug-20 Ross Bay 1	Killarney DS DISCH PT LAKE 1	1 \$220020702090080	2020/6194	12:45 AS	LAKE	116 FPA LAKES	FPA LAKE SAMPLING	Not Authorised	39	20.5		7.1		126	1.40		0.29	0.029		0.11		0.02		0.052	0.32	91.0	8.2	1	2.0		33.0	>11	11	
01-Sep-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2056	12:12 IMCG	LAKE	186_AMBIENT_KILLARNY		Authorised		17.7	7.2		99			<1.3			< 0.05		< 0.005		0.028				8.9		<	1.03	,			ok
01-Sep-20 Ross Bay 2	Killarney _DS_DISCH_PT_LAKE_2	LS220020702090090	2020/2055	12:24 IMCG	LAKE	186_AMBIENT_KILLARNY		Authorised		17.2	7.1		108			1.4			< 0.05		0.01		0.033				8.2		<	1.03	,,			murky
01-Sep-20 Ross Bay 1	Killarney _DS_DISCH_PT_LAKE_1	LS220020702090080	2020/2054	12:30 IMCG	LAKE	186_AMBIENT_KILLARNY		Authorised		17.1	7.1		115			<1.3			< 0.05		0.02		0.043				8.0		<	1.03	, ,			murky
13-Oct-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2543	13:10 AS	LAKE	116_CHLORO_ONLY		Authorised															0.019				/	4.1			,			
13-Oct-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2544	13:10 AS	LAKE	116_LAKE_ALGAL_TRAWL		Not Authorised	1																						· /	· · · · ·		
13-Oct-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2547	13:10 AS	LAKE	186_AMBIENT_KILLARNY		Authorised		12.7	7.5		96			<1.3			< 0.05		0.01		0.017				10.1		<	1.03	'	'		Clear
13-Oct-20 Ross Bay 2	Killarney _DS_DISCH_PT_LAKE_2	LS220020702090090	2020/2546	13:22 AS	LAKE	186_AMBIENT_KILLARNY		Authorised		12.7	7.6		99			<1.3			< 0.05		0.01		0.021				10.3		<	1.03	'	'		Clear
13-Oct-20 Ross Bay 1	Killarney _DS_DISCH_PT_LAKE_1	LS220020702090080	2020/2545	13:30 AS	LAKE	186_AMBIENT_KILLARNY		Authorised		12.9	7.7		99			<1.3			< 0.05		0.01		0.022				10.2		<	1.03	·'			Cloudy
26-Nov-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2984	12:22 AS	LAKE	116_CHLORO_ONLY		Authorised															0.026				1 7	2.0			·'	<u> </u>		
26-Nov-20 Ross Bay 3	Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2986	12:22 AS	LAKE	116_LAKE_ALGAL_TRAWL		Not Authorised	1																		L				·'	<u> </u>		
26-Nov-20 Ross Bay 3	_Killarney_DS_DISCH_PT_LAKE_3	LS220020702090100	2020/2990	12:22 AS	LAKE	186_AMBIENT_KILLARNY		Not Authorised	1	9.5	7.0		100			<1.3			0.06		0.02						9.7		<	1.03	·'	<u> </u>		Cloudy
26-Nov-20 Ross Bay 2	Killarney _DS_DISCH_PT_LAKE_2	LS220020702090090	2020/2989	12:32 AS	LAKE	186_AMBIENT_KILLARNY		Not Authorised	1	9.4	7.0		101			<1.3			0.31	_	0.02						9.8		<	1.03	/	+'	<u> </u>	Brown Colour
26-Nov-20 Ross Bay 1	_Killarney _DS_DISCH_PT_LAKE_1	LS220020702090080	2020/2988	12:40 AS	LAKE	186_AMBIENT_KILLARNY		Not Authorised	1	9.2	6.8		109			<1.3		-	0.06		0.02						9.5		<	1.03	′	+'		Brown Colour
08-Dec-20 Ross Bay 1	Killarney _DS_DISCH_PT_LAKE_1	LS220020702090080	2020/3135	12:35 IMCG	LAKE	186_AMBIENT_KILLARNY		Authorised		7.4	7.1	-	142	-	_	<1.3	_	_	0.25	_	0.03	-	0.034				10.1		1	.03		+'		murky
U8-Dec-20 Ross Bay 3	Killarney_US_UISCH_PT_LAKE_3	LS220020702090100	2020/31370	12:35 IMCG	LAKE	116_LAKES		Not Authorised		7.5	7.2		141	-		12			<0.05		0.02		0.025	-			0.5			1.02	'	+'	+	murku
08 Dec 20 Ross Bay 2	Killarnow DS DISCH DT LAKE 2	L 5220020702090090	2020/3136	12:41 IMCG	LAKE	100_AMDIENT_KILLARNY		Not Authorized		1.5	12	-	141	-	-	1.3		-	0.13	-	0.02	-	0.035	-		-	7.0		<	1.03	'	+'	+	mdrky
08-Dec-20 Ross Bay 2	Killarney DS DISCH PT LAKE 1	1 \$220020702090090	2020/31360	12.41 IMCG	LAKE	116 LAKES		Not Authorised		1	-	1			-		-		0.25		-	-	1	1		1	I					<u> </u>	+	+
08-Dec-20 Ross Bay 3	Killarney DS DISCH PT LAKE 3	L \$220020702090000	2020/31330	12:48 IMCG	LAKE	186 AMBIENT KILLAPNY		Authorised		8.0	7.3		94			<1.3			<0.05	-	0.01		0.020				10.5			1.03		·'	<u> </u>	SI murky
				12.40 11100					1	1	1.0.00		10.0			1 4	1	1	1		1.00.00	1		1	1	1								A