

Annual Environmental Report

2020



Ballybunion

D0183-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2020 AER

This Annual Environmental Report has been prepared for D0183-01, Ballybunion, 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)

- BALLYBUNNION WWTP - 2020 with a Plant Capacity PE of 8180, the treatment type is 2 - Secondary treatment

1.3 ELV OVERVIEW

The overall compliance of the final effluent with the Emission Limit Values (ELVs) is shown below. More detailed information on the below ELV's can be found in Section 2.

Discharge Point Reference	Treatment Plant	Discharge Type	Compliance Status	Parameters failing if relevant
TPEFF1300D0183SW001	BALLYBUNNION 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 BALLYBUNNION WWTP - 2020 - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - BALLYBUNNION 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
Suspended Solids mg/l	12	301	103.4
Total Nitrogen mg/l	12	53.34	19.51
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	12	300	110.59
COD-Cr mg/l	12	623	237.02
Total Phosphorus (as P) mg/l	12	7.44	3.53
Hydraulic Capacity	N/A	14005	2472

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 - TPEFF1300D0183SW001

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	27.13	Pass
Suspended Solids mg/l	35	87.5	N/A	12	N/A	N/A	3.76	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	20	40	N/A	12	N/A	N/A	1.98	Pass
pH pH units	9	9	N/A	12	N/A	N/A	7.44	Pass
Ammonia-Total (as N) mg/l	5	6	N/A	12	1	1	1.63	Fail
Visual Inspection Descriptive	N/A	N/A	N/A	12	N/A	N/A	N/A	
Total Oxidised Nitrogen (as N) mg/l	N/A	N/A	N/A	2	N/A	N/A	13.75	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	1	N/A	N/A	2.94	
Conductivity @20°C µS/cm	N/A	N/A	N/A	11	N/A	N/A	651.35	

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)
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	12	N/A	N/A	1.62	
Total Nitrogen mg/l	N/A	N/A	N/A	12	N/A	N/A	10.62	

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):

There was one ammonia exceedance due to shock loading.

Significance of Results:

There was one ammonia exceedance due to shock loading.

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF1300D0183SW001

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	85811, 138215	TW13004121CF2006	No	No	No	No	Poor
Downstream	85811, 138215	CW03004120SN7007	No	No	No	No	Good

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

Significance of Results:

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

The ambient monitoring results 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 - BALLYBUNNION WWTP - 2020

2.1.4.1 Treatment Efficiency Report - BALLYBUNNION 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)
TP	3683	1690	54
cBOD	115384	2067	98

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
SS	107879	3918	96
COD	247285	28300	89
TN	20352	11083	46

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

2.1.4.2 Treatment Capacity Report Summary - BALLYBUNNION 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.

BALLYBUNNION WWTP - 2020	
Peak Hydraulic Capacity (m ³ /day) - As Constructed	5790
DWF to the Treatment Plant (m ³ /day)	1930
Current Hydraulic Loading - annual max (m ³ /day)	14005
Average Hydraulic loading to the Treatment Plant (m ³ /day)	2472
Organic Capacity (PE) - As Constructed	8180
Organic Capacity (PE) - Collected Load (peak week) ^{Note1}	5240
Organic Capacity (PE) - Remaining	2940
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 - BALLYBUNNION 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	Blocked Sewer	1	No	Yes
Breach of ELV	Plant or equipment maintenance at WWTP	1	No	No

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2020	2
Number of Incidents reported to the EPA via EDEN in 2020	2
Explanation of any discrepancies between the two numbers above	N/A

4 INFRASTRUCTURAL ASSESSMENTS AND PROGRAMME OF IMPROVEMENTS

4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT

A summary of the operation of the storm water overflows and their significance where known is included below:

4.1.1 SWO IDENTIFICATION

WWDL Name / Code for Storm Water Overflow	Irish Grid Ref.	Included in Schedule A4 of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2020 (No. of events)	Total volume discharged in 2020 (m3)	Monitoring Status
SW2	86161, 141002	Yes	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
SW3	85789, 138180	No	Low	Meeting	Unknown	Unknown	Monitored
TBC	87735, 139506	No	Low	Meeting	Unknown	Unknown	Monitored
TBC	85818, 140943	No	Low	Meeting	Unknown	Unknown	Monitored
TBC	86529, 139982	No	Low	Meeting	Unknown	Unknown	Monitored
TBC	86222, 138582	No	Low	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
D0183-SIP:01	SW1 - Upgrading of Storm Water Overflows to comply with the criteria outlined in the DoECLG "Procedures and Criteria in relation to Storm Water Overflows, 1995"	C	01/01/2020	Yes	Works Completed		

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
D0183-SIP:02	SW2 - Upgrading of Storm Water Overflows to comply with the criteria outlined in the DoECLG "Procedures and Criteria in relation to Storm Water Overflows, 1995"	C	01/01/2020	Yes	Works Completed		

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

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

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

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

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

5 LICENCE SPECIFIC REPORTS

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

5.a Licence Specific Reports Summary Table

Licence Specific Report	Required by licence	Year included in AER	Included in this AER	Reference to relevant section of AER
There is no Licence Specific Report Required in this AER Annual Review.				

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
Does the AER include an Executive Summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
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	Yes

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

Signed: Date: 11/05/2021

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

Cashen	IE_SH_060_0100	Transitional	TW1300412CF2001	CF140 - Galey River, ds Drom	Operations Kerry Cour	1300754	04/03/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.79	OK	0.01	0.79	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2005	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1413234	02/09/2014	TRAC Surf: Time samp Descriptive Descriptive			08:33	OK		08:33	OK	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2006	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1413235	02/09/2014	TRAC Bott: Time samp Descriptive Descriptive			08:33	OK		08:33	OK	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2007	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1413236	02/09/2014	TRAC Surf: Time samp Descriptive Descriptive			14:28	OK		14:28	OK	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2008	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1413257	02/09/2014	TRAC Bott: Time samp Descriptive Descriptive			15:12	OK		15:12	OK	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2009	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1541116	23/03/2015	TRAC Surf: Time samp Descriptive Descriptive			9.02	OK		9.02	OK	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2010	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1541117	23/03/2015	TRAC Bott: Time samp Descriptive Descriptive			9.15	OK		9.15	OK	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2011	CF165 - Leagh-Marshes	Operations Kerry Cour	1541123	23/03/2015	TRAC Bott: Time samp Descriptive Descriptive		10.35	OK		10.35	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2012	CF165 - Leagh-Marshes	Operations Kerry Cour	1413262	02/09/2014	TRAC Surf: Time samp Descriptive Descriptive	nm	OK	1.5		1.5	NM	1.5	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2013	CF165 - Leagh-Marshes	Operations Kerry Cour	1413263	02/09/2014	TRAC Surf: Time samp Descriptive Descriptive	nm	OK	1.5		1.5	NM	1.5	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2014	CF170 - Ferry Bridge	Operations Kerry Cour	1413265	02/09/2014	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	nm	OK	1.5		1.5	NM	1.5
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2015	CF150 - Brick Estuary, Br W	Operations Kerry Cour	18103950	08/03/2018	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	11	OK	2	11	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2016	CF165 - Leagh-Marshes	Operations Kerry Cour	18107214	15/05/2018	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	14	OK	2	14	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2017	CF150 - Brick Estuary, Br W	Operations Kerry Cour	18107218	15/05/2018	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	11	OK	2	11	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2018	CF160 - Ballyhogan	Operations Kerry Cour	18107228	15/05/2018	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	13	OK	2	13	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2019	CF160 - Ballyhogan	Operations Kerry Cour	18107600	04/03/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.33	OK	0.01	0.33	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2020	CF165 - Leagh-Marshes	Operations Kerry Cour	1301736	28/05/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.06	OK	0.01	0.06	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2021	CF165 - Leagh-Marshes	Operations Kerry Cour	1301737	28/05/2013	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.06	OK	0.01	0.06	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2022	CF190 - Moneycashen	Operations Kerry Cour	1301749	28/05/2013	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.09	OK	0.01	0.07	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2023	CF170 - Ferry Bridge	Operations Kerry Cour	1301752	28/05/2013	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.42	OK	0.01	0.42	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2024	CF170 - Ferry Bridge	Operations Kerry Cour	1302741	16/07/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.3	OK	0.01	0.3	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2025	CF160 - Ballyhogan	Operations Kerry Cour	1302745	16/07/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.51	OK	0.01	0.51	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2026	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1541124	23/03/2015	TRAC Bott: Time samp Descriptive Descriptive		13.59	OK		13.59	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2027	CF165 - Leagh-Marshes	Operations Kerry Cour	1541125	23/03/2015	TRAC Surf: Time samp Descriptive Descriptive		10.21	OK		10.21	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2028	CF160 - Ballyhogan	Operations Kerry Cour	1541126	23/03/2015	TRAC Surf: Time samp Descriptive Descriptive		10.4	OK		10.4	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2029	CF170 - Ferry Bridge	Operations Kerry Cour	1541135	23/03/2015	TRAC Surf: Time samp Descriptive Descriptive		13.37	OK		13.37	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2030	CF165 - Leagh-Marshes	Operations Kerry Cour	1541137	23/03/2015	TRAC Bott: Time samp Descriptive Descriptive		14.19	OK		14.19	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2031	CF170 - Ferry Bridge	Operations Kerry Cour	1543011	22/06/2015	TRAC Surf: Time samp Descriptive Descriptive		07:57	OK		07:57	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2032	CF160 - Ballyhogan	Operations Kerry Cour	1543013	22/06/2015	TRAC Bott: Time samp Descriptive Descriptive		09:54	OK		09:54	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2033	CF160 - Ballyhogan	Operations Kerry Cour	1543019	22/06/2015	TRAC Surf: Time samp Descriptive Descriptive		13:40	OK		13:40	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2034	CF140 - Galey River, ds Drom	Operations Kerry Cour	1302749	16/07/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	2.03	OK	0.01	2.03	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2035	CF170 - Ferry Bridge	Operations Kerry Cour	1302755	16/07/2013	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.18	OK	0.01	0.18	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2036	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1302756	16/07/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.02	OK	0.01	0.02	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2037	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1302757	16/07/2013	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.19	OK	0.01	0.19	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2038	CF170 - Ferry Bridge	Operations Kerry Cour	1302474	27/08/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	1	OK	0.01	0.48	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2039	CF190 - Moneycashen	Operations Kerry Cour	1303478	27/08/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.34	OK	0.01	0.34	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2040	CF165 - Leagh-Marshes	Operations Kerry Cour	1303482	27/08/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.94	OK	0.01	0.94	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2041	CF170 - Ferry Bridge	Operations Kerry Cour	1812605	02/08/2018	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	2.7	OK	2	2.7	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2042	CF150 - Brick Estuary, Br W	Operations Kerry Cour	1812618	12/08/2018	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	11	OK	2	11	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2043	CF170 - Ferry Bridge	Operations Kerry Cour	19102340	02/02/2019	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	14	OK	2	14	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2044	CF150 - Brick Estuary, Br W	Operations Kerry Cour	19102248	12/02/2019	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	2	OK	2	19	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2045	CF150 - Brick Estuary, Br W	Operations Kerry Cour	19107206	14/05/2019	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	6.4	OK	2	6.4	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2046	CF150 - Brick Estuary, Br W	Operations Kerry Cour	19109918	25/06/2019	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	8.5	OK	2	8.5	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2047	CF170 - Ferry Bridge	Operations Kerry Cour	1912970	13/08/2019	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	19	OK	2	19	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2048	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1543040	22/06/2015	TRAC Bott: Time samp Descriptive Descriptive		14:14	OK		14:14	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2049	CF170 - Ferry Bridge	Operations Kerry Cour	1543042	22/06/2015	TRAC Surf: Time samp Descriptive Descriptive		14:21	OK		14:21	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2050	CF170 - Ferry Bridge	Operations Kerry Cour	1544052	27/07/2015	TRAC Bott: Time samp Descriptive Descriptive		08:09	OK		08:09	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2051	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1544053	27/07/2015	TRAC Surf: Time samp Descriptive Descriptive		08:16	OK		08:16	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2052	CF190 - Moneycashen	Operations Kerry Cour	1544055	27/07/2015	TRAC Surf: Time samp Descriptive Descriptive		12:51	OK		12:51	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2053	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1544059	27/07/2015	TRAC Bott: Time samp Descriptive Descriptive		14:51	OK		14:51	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2054	CF165 - Leagh-Marshes	Operations Kerry Cour	1544060	27/07/2015	TRAC Surf: Time samp Descriptive Descriptive		14:55	OK		14:55	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2055	CF165 - Leagh-Marshes	Operations Kerry Cour	1544570	24/08/2015	TRAC Surf: Time samp Descriptive Descriptive		9:31	OK		9:31	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2056	CF190 - Moneycashen	Operations Kerry Cour	1303499	27/08/2013	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.23	OK	0.01	0.23	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2057	CF165 - Leagh-Marshes	Operations Kerry Cour	1303501	27/08/2013	TRAC Bott: Total Oxdil mg/l	milligrams per litre	1.08	OK	0.01	1.08	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2058	CF180 - D/S Ferry Bridge	Operations Kerry Cour	1410559	27/02/2014	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.78	OK	0.01	0.78	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2059	CF160 - Ballyhogan	Operations Kerry Cour	1410572	27/02/2014	TRAC Depl: Total Oxdil mg/l	milligrams per litre	0.63	OK	0.01	0.63	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2060	CF160 - Ballyhogan	Operations Kerry Cour	1410584	27/02/2014	TRAC Surf: Total Oxdil mg/l	milligrams per litre	0.47	OK	0.01	0.47	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2061	CF190 - Moneycashen	Operations Kerry Cour	1411590	17/06/2014	TRAC Surf: Total Oxdil mg/l	milligrams per litre	-0.01	OK	0.01	0.005	<0.01	OK	0.01
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2062	CF140 - Galey River, ds Drom	Operations Kerry Cour	1411601	17/06/2014	TRAC Bott: Total Oxdil mg/l	milligrams per litre	0.76	OK	0.01	0.76	OK	0.01	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2063	CF140 - Galey River, ds Drom	Operations Kerry Cour	1912978	13/08/2019	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	36	OK	2	36	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2064	CF150 - Brick Estuary, Br W	Operations Kerry Cour	1912983	13/08/2019	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	19	OK	2	19	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2065	CF170 - Ferry Bridge	Operations Kerry Cour	20102900	30/07/2020	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	8.8	OK	2	8.8	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2066	CF170 - Ferry Bridge	Operations Kerry Cour	20102886	30/07/2020	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	10	OK	2	10	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2067	CF140 - Galey River, ds Drom	Operations Kerry Cour	20108873	16/12/2020	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	14	OK	2	14	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2068	CF150 - Brick Estuary, Br W	Operations Kerry Cour	20108118	16/07/2020	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	9.4	OK	2	9.4	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2069	CF140 - Galey River, ds Drom	Operations Kerry Cour	2010820	16/07/2020	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	13	OK	2	13	OK	2	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2070	CF140 - Galey River, ds Drom	Operations Kerry Cour	1544575	24/08/2015	TRAC Surf: Time samp Descriptive Descriptive		10:47	OK		10:47	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2071	CF165 - Leagh-Marshes	Operations Kerry Cour	1544589	24/08/2015	TRAC Surf: Time samp Descriptive Descriptive		14:52	OK		14:52	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2072	CF165 - Leagh-Marshes	Operations Kerry Cour	1544590	24/08/2015	TRAC Bott: Time samp Descriptive Descriptive		14:52	OK		14:52	OK		
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2073	CF165 - Leagh-Marshes	Operations Kerry Cour	1300744	04/03/2013	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	nm	OK	1.5		NM	1.5	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2074	CF160 - Ballyhogan	Operations Kerry Cour	1300745	04/03/2013	TRAC Surf: TOC (as NF mg/l)	milligrams per litre	nm	OK	1.5		NM	1.5	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2075	CF160 - Ballyhogan	Operations Kerry Cour	1300746	04/03/2013	TRAC Bott: TOC (as NF mg/l)	milligrams per litre	nm	OK	1.5		NM	1.5	
Cashen	IE_SH_060_0100	Transitional	TW1300412CF2076	CF165 - Leagh-Marshes	Operations Kerry Cour	1300758	04/03/									

