Annual Environmental Report

2021

Swords

D0024-01

CONTENTS

1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0024-01, Swords, in Dublin 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 were no capital works, significant changes or operational improvements undertaken in 2021.

1.2 TREATMENT SUMMARY

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

- SWORDS WWTP with a Plant Capacity PE of 70000, the treatment type is 3NP - Tertiary N&P removal
- TOBERBURR WWTP with a Plant Capacity PE of 500, the treatment type is 2 - Secondary treatment

Currently there is a secondary discharge from the Toberburr Activated Sludge Treatment Plant. Toberburr is a Conventional Activated Sludge plant with an aeration tank, settlement tank and a sludge holding tank. It has a design PE of 500. The plant is currently operating effectively.

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
TPEFF0900D0024SW001	SWORDS WWTP	Treated	Complaint	N/A
TPEFF0900D0024SW002	TOBERBURR WWTP	Treated	Compliant	N/A

1.4 LICENCE SPECIFIC REPORTING

Assessment / Report
There are no Licence Specific Reports included in this AER.

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 SWORDS WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - SWORDS 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
Total Phosphorus (as P) mg/l	30	23	7.40
Ammonia-Total (as N) mg/l	30	97	37
Total Nitrogen mg/l	30	143	53
pH pH units	30	8.30	7.69
COD-Cr mg/l	30	2070	607.87
Suspended Solids mg/l	30	1002	301.70
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	28	1124	252
ortho-Phosphate (as P) - unspecified mg/l	30	11	4.02
Hydraulic Capacity	N/A	45018	13699

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 sectional 'Operational Performance Summary'. The design of the wastewater treatment plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values.

2.1.2 EFFLUENT MONITORING SUMMARY – SWORDS WWTP

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included [Note 1]	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	250	N/A	33	N/A	N/A	33	Pass
Suspended Solids mg/l	35	87.5	N/A	33	N/A	N/A	11	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	31	N/A	N/A	4.94	Pass
Total Nitrogen mg/l	15	18	N/A	33	1	N/A	11	Pass
Total Oxidised Nitrogen (as N) mg/l	10	12	N/A	2	N/A	N/A	8.52	Pass
pH pH units	6.00	9.00	N/A	33	N/A	N/A	7.82	Pass
Total Phosphorus (as P) mg/l	2.00	2.40	N/A	33	N/A	N/A	0.572	Pass

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included [Note 1]	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Conductivity @20°C µS/cm	N/A	N/A	N/A	33	N/A	N/A	852	
Dissolved Inorganic Nitrogen (as N) mg/l	N/A	N/A	N/A	33	N/A	N/A	9.40	
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	33	N/A	N/A	0.206	
Coliform Bacteria (Total) no./100mls	N/A	N/A	N/A	2	N/A	N/A	49993	
Ammonia-Total (as N) mg/l	N/A	N/A	N/A	33	N/A	N/A	1.26	
Nitrate (as N) mg/l	N/A	N/A	N/A	33	N/A	N/A	7.81	
Nitrite (as N) mg/l	N/A	N/A	N/A	33	N/A	N/A	0.335	
Total Oxidised Nitrogen (as N) mg/l	N/A	N/A	N/A	31	N/A	N/A	8.11	
E. Coli no./100mls	N/A	N/A	N/A	2	N/A	N/A	13222	

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included [Note 1]	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Enterococci (Intestinal) no./100mls	N/A	N/A	N/A	1	N/A	N/A	13800	

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied
2 – For pH the WWDA specifies a range of pH 6 - 9

Cause of Exceedance(s):

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 - SWORDS WWTP DISCHARGE

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

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

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Ecological Status
Upstream	318960, 248006	TW09001008BM1008	No	No	No	No	Poor

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Ecological Status
Downstream (BM130 - Seatown East)	320527, 247216	TW09001008BM1002	Yes	No	No	No	Poor
Downstream (BM140 - Barrack Br)	321268, 246845	TW09001008BM1003	Yes	No	No	No	Poor

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 Swords WWTP discharge was compliant with the ELV's set in the wastewater discharge licence.

The secondary discharge from the Toberburr WWTP was compliant with the ELV's set in the wastewater discharge licence.

The ambient monitoring results do not meet the required EQS at the upstream and the downstream monitoring locations. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

Based on ambient monitoring results a deterioration in BOD, Reactive Phosphorous and DIN 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.

Based on the 2021 effluent compliance, it is not considered that the Swords WWTP and Toberburr WWTP are having an observable negative impact on the water quality downstream.

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

The discharges from the wastewater treatment plants do not have an observable negative impact on the Water Framework Directive status.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - SWORDS WWTP

2.1.4.1 Treatment Efficiency Report - SWORDS 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	40513	2904	93
COD	3326307	165388	95
cBOD	1491750	25178	98
SS	1665384	58233	97
TN	289464	55103	81

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

2.1.4.2 Treatment Capacity Report Summary - SWORDS 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.

SWORDS WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	60750
DWF to the Treatment Plant (m^3/day)	20250
Current Hydraulic Loading - annual max (m^3/day)	45018

SWORDS WWTP	
Average Hydraulic loading to the Treatment Plant (m^3/day)	13699
Organic Capacity (PE) - As Constructed	70000
Organic Capacity (PE) - Collected Load (peak week)[Note1]	58104
Organic Capacity (PE) - Remaining	11896
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 - SWORDS 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)
Domestic /Septic Tank Sludge	60	Volume (m^3)	0.73	0.0	Yes	Yes	No

2.2 TOBERBURR WWTP - TREATED DISCHARGE

2.2.1 INFLUENT MONITORING SUMMARY - TOBERBURR 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
There is no Influent data for the TOBERBURR WWTP.			

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.

2.2.2 EFFLUENT MONITORING SUMMARY - TOBERBURR WWTP

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included [Note 1]	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	250	N/A	7	N/A	N/A	N/A	Pass
Suspended Solids mg/l	35	88	N/A	7	N/A	N/A	N/A	Pass
BOD, 5 days with Inhibition (Carbonaceous) mg/l	25	50	N/A	7	N/A	N/A	N/A	Pass
pH pH units	6.00	9.00	N/A	7	N/A	N/A	N/A	Pass

Notes:
1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied
2 – For pH the WWDA specifies a range of pH 6 - 9

Cause of Exceedance(s):

Not applicable

Significance of Results:

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

2.2.3 AMBIENT MONITORING SUMMARY - TOBERBURR WWTP DISCHARGE

There is no ambient monitoring data for the Toberburr WWTP.

Based on effluent compliance however it is not considered that the Toberburr WWTP is having an observable negative impact on the water quality downstream or on Water Framework Directive status.

2.2.4 OPERATIONAL PERFORMANCE SUMMARY - TOBERBURR WWTP

2.2.4.1 Treatment Efficiency Report - TOBERBURR 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)
There is no Influent data for the TOBERBURR WWTP and therefore the % efficiency of the treatment process cannot be calculated.			

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

2.2.4.2 Treatment Capacity Report Summary - TOBERBURR 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.

TOBERBURR WWTP	
Peak Hydraulic Capacity (m^3/day) - As Constructed	N/A
DWF to the Treatment Plant (m^3/day)	N/A
Current Hydraulic Loading - annual max (m^3/day)	509
Average Hydraulic loading to the Treatment Plant (m^3/day)	138
Organic Capacity (PE) - As Constructed	500
Organic Capacity (PE) - Collected Load (peak week)[Note1]	587
Organic Capacity (PE) - Remaining	0
Will the capacity be exceeded in the next three years? (Yes/No)	Yes

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.

2.2.5 SLUDGE / OTHER INPUTS - TOBERBURR WWTP

'Other inputs' to the waste water treatment plant are summarised in table below

Input type	Quantity	Unit	P.E.	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
There is no Sludge and Other Input data for the Treatment Plant included in the AER.							

3 COMPLAINTS AND INCIDENTS

3.1 COMPLAINTS SUMMARY

A summary of complaints of an environmental nature related to the discharge(s) to water from the WWTP and network is included below.

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

3.2 REPORTED INCIDENTS SUMMARY

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

A summary of reported incidents is included below.

3.2.1 SUMMARY OF INCIDENTS

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	No
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	Yes
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	Yes

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	Yes
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	No
Spillage	Tank Overflow	1	No	No
Trigger Level Reached	Shock load to the WWTP	1	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	7
Number of Incidents reported to the EPA via EDEN in 2021	7
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 (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m^3)	Monitoring Status
TBC	318917, 247985	No	Low	n/a	Unknown	Unknown	Not Monitored
TBC	319292, 247612	No	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	319297, 245571	No	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	320128, 245433	No	Low	Meeting	Unknown	Unknown	Not Monitored
TBC	317525, 245599	No	Low	Meeting	Unknown	Unknown	Not Monitored
SW25(a)	319294, 247773	Yes	Low	Meeting	Unknown	Unknown	Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m^3)	Monitoring Status
SW17	318046, 246421	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW19	317411, 247127	Yes	Low	Meeting	Unknown	Unknown	Not Monitored
SW25(b)	319294, 247772	Yes	Low	Meeting	Unknown	Unknown	Monitored

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

SWO Summary	
How much sewage was discharged via monitored SWOs in the agglomeration in the year (m^3)?	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 a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
D0024-SIP:01	Installation of enhanced nutrient reduction measure(s) at WWTP, as required, to meet the emission limit values	C	31/12/2021	No	Works Completed		
D0024-SIP:02	Replacement of Toberburr WWTP with a pumping station and construction of rising mains and gravity sewers to divert all effluent to Swords WWTP for treatment	C	31/12/2015	Yes	Not Started		Not required until future development connects
D0024-SIP:03	SW002 (1) Toberburr Activated Sludge Treatment Plant to be discontinued	A	31/12/2015	Yes	Not Started		Not required until future development connects
D0024-SIP:04	Upgrade of WWTP to cater for 90,000 p.e., with enhanced	C	31/12/2015	Yes	Works Completed		

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
	nutrient reduction, UV disinfection system, new storm water holding tank and ancillary works						
D0024-SIP:05	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	31/12/2015	Yes	At Planning Stage		All comply no works required

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

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

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

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

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

5 LICENCE SPECIFIC REPORTS

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

Licence Specific Report	Required by licence	Year included in AER	Included in this AER
Priority Substances Assessment	Yes	2014	No

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
Does the AER include an Executive Summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e., have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Has a Technical amendment/licence review application been submitted to the Agency by IW?	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?	N/A
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER	N/A

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

Date: 22/04/2022

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

Katherine Walshe

Acting Head of Environmental Regulation.

7 APPENDIX

Appendix
Appendix 7.1 - Ambient monitoring summary

Swords Ambient Monitoring Data 2021

Ambient Monitoring Report Summary Table

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Status
Upstream	318960, 248006	TW09001008BM1008	No	No	No	No	Poor
Downstream (BM140 - Barrack Br)	321268, 246845	TW09001008BM1003	Yes	No	No	No	Poor
Downstream (BM130 - Seatown East)	320527, 247216	TW09001008BM1002	Yes	No	No	No	Poor

2021 Ambient Monitoring Summary

Sampling Point	Sampled Date	Ammonia µg/l as N	B.O.D. Saline mg/l	Chlorophyll a mg/m^3	DIN µg/l	Dissolved Oxygen % Sat.	pH pH	Pheophytin a mg/m^3	Phosphorus (React) µg/l SRP as P	Salinity PSU	Temp °C	TON µg/l as N	Total Phosphorus µg/l as P
BM020	21/07/2021 08:00	30	1	9.3	1094	119	8.2	2.4	93	0.1	19.8	1064	116
BM020	13/10/2021 08:50	<10	<1	2.7	< 50	114	8.2	3.7	11	1.1	13.5	<40	196
BM130	21/07/2021 08:40	86	7	6.8	823	87	8.1	2.9	423	20.1	21.8	737	500
BM130	13/10/2021 09:30	183	1	3.5	244	82	7.9	5.7	68	32.4	14.3	61	88.5
BM140	21/07/2021 09:05	110	5	10.5	1135	101	8.4	2.9	381	16.5	22.2	1025	425
BM140	13/10/2021 09:50	231	2	3.5	390	87	7.9	2	78	28	13.7	159	115

Donabate, Balcarrick Beach Bathing Waters (EPA Beaches.ie)

The Escherichia coli and Intestinal enterococci results for the 2020 sample period are tabled below.

Date	Escherichia coli	Intestinal enterococci	Sample Quality Status
06/09/2021	20	4	Excellent
31/08/2021	<10	2	Excellent
17/08/2021	<10	5	Excellent
03/08/2021	<10	1	Excellent
19/07/2021	<10	15	Excellent
05/07/2021	41	11	Excellent
21/06/2021	10	7	Excellent
08/06/2021	<10	6	Excellent
24/05/2021	<10	2	Excellent

Donabate, Balcarrick Beach achieved "*Excellent*" status for all samples taken during the 2021 bathing season

Malahide Beach

Date	Escherichia coli	Intestinal enterococci	Sample Quality Status
24/05/2021	<10	6	Excellent
08/06/2021	20	23	Excellent
21/06/2021	31	37	Excellent
05/07/2021	<10	5	Excellent
19/07/2021	30	6	Excellent
03/08/2021	602	440	Poor
17/08/2021	1112	85	Poor
31/08/2021	10	1	Excellent
06/09/2021	63	19	Excellent

Although Malahide Beach is no longer classified as a bathing water, it is still monitored during the bathing season. During 2021, seven out of nine samples achieved "*Excellent"* status and two samples taken during August were assesses as having "*Poor*" status. Follow up samples were taken two days after each of these, and they achieved "excellent" status.