Annual Environmental Report

2024



Malahide

D0021-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2024 AER

This Annual Environmental Report has been prepared for D0021-01, Malahide, 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 changes undertaken in 2024.

1.2 TREATMENT SUMMARY

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

• Malahide WWTP with a Plant Capacity PE of 27000, 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
TPEFF0900D0021SW001	Malahide WWTP	Treated	Non-Compliant	Suspended Solids mg/l

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 MALAHIDE WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - MALAHIDE 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
ortho-Phosphate (as P) - unspecified mg/l	13	5.94	3.69
BOD, 5 days with Inhibition (Carbonaceous) mg/l	13	339	235
Suspended Solids mg/l	13	296	219
Total Phosphorus (as P) mg/l	13	8.3	6.0
pH pH units	13	8.2	7.69
COD-Cr mg/l	13	616	433
Total Nitrogen mg/l	13	69	45
Ammonia-Total (as N) mg/l	13	45	33
Hydraulic Capacity	N/A	10490	4738

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'.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF0900D0021SW001

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	14	1	N/A	69.64	Pass
Total Oxidised Nitrogen (as N) mg/l	35	42	N/A	14	N/A	N/A	10.96	Pass
Suspended Solids mg/l	35	87.5	N/A	14	6	2	44.85	Fail
BOD, 5 days with Inhibition (Carbonaceous) mg/l	25	50	N/A	14	N/A	N/A	11.21	Pass
pH pH units	6	9	N/A	14	N/A	N/A	7.48	Pass
Ammonia-Total (as N) mg/l	5	6	N/A	14	N/A	N/A	1.03	Pass
ortho-Phosphate (as P) - unspecified mg/l	N/A	N/A	N/A	14	N/A	N/A	2.27	

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)
Nitrate (as N) mg/l	N/A	N/A	N/A	14	N/A	N/A	10.84	
Dissolved Inorganic Nitrogen (as N) mg/l	N/A	N/A	N/A	14	N/A	N/A	11.99	
Total Nitrogen mg/l	N/A	N/A	N/A	14	N/A	N/A	14.26	
Nitrite (as N) mg/l	N/A	N/A	N/A	14	N/A	N/A	0.123	
Total Phosphorus (as P) mg/l	N/A	N/A	N/A	14	N/A	N/A	2.83	
Conductivity @20°C µS/cm	N/A	N/A	N/A	14	N/A	N/A	2198	

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):

Plant or equipment breakdown at WWTP.

Significance of Results:

The WWTP is non compliant with the ELV's set in the Wastewater Discharge Licence. The impact on receiving waters is assessed further in Section 2.

^{2 -} For pH the WWDA specifies a range of pH 6 - 9

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF0900D0021SW001

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
Downstream (BM210)	322582, 246924	CW09001007BM2001	No	No	No	Yes	Moderate
Downstream (BM220)	322731, 246527	CW09001007BM2002	No	No	No	Yes	Moderate
Downstream (BM230)	323481, 246290	CW09001007BM2003	No	No	No	Yes	Moderate
Balcarrick Beach, Donabate	324034E, 246133N	N/A	Yes	No	No	Yes	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 coastal/transitional ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence for the following: Suspended Solids mg/l.

Based on ambient monitoring results a deterioration in BOD, Ammonia, DO (mg/l) & DIN directly d/s at BM220 concentrations downstream of the effluent discharge is noted.

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

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

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

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

The discharge from the wastewater treatment plant does not have an observable impact on the bathing 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 - MALAHIDE WWTP

2.1.4.1 Treatment Efficiency Report - Malahide 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)	
cBOD	406026	19378	95	
COD	747980	120433	84	
ss	378869	77559	80	
TN	77903	24658	68	
ТР	10352	4886	53	

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

2.1.4.2 Treatment Capacity Report Summary - Malahide 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.

Malahide WWTP	
Peak Hydraulic Capacity (m³/day) - As Constructed	15033
DWF to the Treatment Plant (m³/day)	5011
Current Hydraulic Loading - annual max (m³/day)	10490
Average Hydraulic loading to the Treatment Plant (m³/day)	4738
Organic Capacity (PE) - As Constructed	27000
Organic Capacity (PE) - Collected Load (peak week)Note1	21214
Organic Capacity (PE) - Remaining	5786
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 - MALAHIDE 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 environme	ental complaints in 2024.		

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 Uisce Éireann 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	Recurring (Y/N)	Closed (Y/N)	
Uncontrolled release	Inadequate Operational Procedures/Training	No	No	
Breach of ELV	Plant or equipment breakdown at WWTP	Yes	No	

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2024	2
Number of Incidents reported to the EPA via EDEN in 2024	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 (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 2024 (No. of events)	Total volume discharged in 2024 (m³)	Monitoring Status
S2	322923, 246285	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
S3	322762, 246363	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
S8	321692, 243274	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
SW289	321566, 243257	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
SW35	322514, 246319	Yes	Low Significance	Meeting Criteria	Unknown	16033	Monitored
твс	321851, 243988	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not 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 2024 (No. of events)	Total volume discharged in 2024 (m³)	Monitoring Status
твс	321835, 243989	Yes	Low Significance	Not Meeting Criteria	Unknown	Unknown	Not Monitored
твс	322330, 246309	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
твс	322857, 244585	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
твс	321007, 245502	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
твс	322899, 244923	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
твс	321661, 246521	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
твс	321000, 245870	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored
твс	-, -	Yes	Low Significance	Meeting Criteria	Unknown	Unknown	Not Monitored

The contents presented in this table include the most up to date information available at the time of writing. Any TBC SWO(s) were identified as part of the ongoing National SWO programme and will be updated in subsequent AER(s) once the information is confirmed.

SWO Summary	
How much wastewater discharge by metered SWOs during the year (m³)?	16033
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	Yes
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
D0021-SIP:01	Implementation of the measure(s) identified in Condition 5.3(a)(v)	С	14/03/2011	Yes	Works Completed		
D0021-SIP:02	Network improvements under the Malahide Sewerage Scheme	С	31/07/2014	Yes	At Planning Stage		

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
D0021-SIP:03	S2 - Upgrade of Stormwater Overflows to comply with the criteria outlined in the DoEHLG 'Procedures and Criteria in relation to Storm Water Overflows', 1995	С	31/07/2014	Yes	At Planning Stage		
D0021-SIP:04	S3 - Upgrade of Stormwater Overflows to comply with the criteria outlined in the DoEHLG 'Procedures and Criteria in relation to Storm Water Overflows', 1995	С	31/07/2014	Yes	At Planning Stage		
D0021-SIP:05	S35 - Upgrade of Stormwater Overflows to comply with the criteria outlined in the DoEHLG 'Procedures and Criteria in relation to Storm Water Overflows', 1995	С	31/07/2014	Yes	At Planning Stage		
D0021-SIP:06	S8 - Upgrade of Stormwater Overflows to comply with the criteria outlined in the DoEHLG 'Procedures and Criteria in relation to Storm Water Overflows', 1995	С	31/07/2014	Yes	Works Completed		

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 improver	nents 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	Included in this AER
D0021-01-Priority Substances Assessment	Yes	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
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?	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: 28/04/2025

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

Eleanor Roche

Head of Environmental Regulation.

7 APPENDIX

Appendix

Appendix 7.1 - Ambient Monitoring Summary

Malahide Ambient Monitoring Data 2024

Ambient Monitoring Report Summary Table

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	EPA Feature Coding Tool code	Bathing Water	Drinking Water	FWPM	Shellfish	Current WFD Status
BM210-Causeway Cascade	322582E, 246924N	CW09001007BM2001	No	No	No	Yes	Moderate
BM220-Malahide Marina	322731E, 246527N	CW09001007BM2002	No	No	No	Yes	Moderate
BM230-Malahide Navigation Channel	323481E, 246290N	CW09001007BM2003	No	No	No	Yes	Moderate
Balcarrick Beach, Donabate	324034E, 246133N	N/A	Yes	No	No	Yes	Good

2024 Ambient Monitoring Summary

Monitoring	Sample Date	Ammonia	Biochemical Oxygen	Dissolved	Dissolved Oxygen %	рН	Temperatu	Total	Chlorophyll	Salinity	DIN
Result Source	Sample Date	Ammonia	Demand	Oxygen	Saturation	рп	re - Surface	Nitrogen	_a	Samily	DiN
		mg/L NH₃- N	mg/l	mg/l	% Sat.	pH units	Degrees C	mg/l	mg/m3	S	mg/L N
Malahide (BM210)	28/02/2024	< 0.02	1.3	11.77	100.6	7.5	9.1	< 0.5	4.72	32.91	0.50
Malahide (BM210)	06/06/2024	0.54	2.1	10.23	102.5	7.0	14.0	< 0.5	< 1.0	34.83	0.64
Malahide (BM210)	04/09/2024	0.42	2.4	10.91	101.3	7.8	16.4	< 0.5	<1	35	0.47
Malahide (BM210)	12/11/2024	0.02	2.1	10.42	99.9	7.2	10.3	< 0.5	<1	34	< 0.5
	Mean	0.28	1.98	10.83	101.08	7.38	12.45	0.35	1.71	34.19	0.49
	95%ile	0.52	2.36	11.64	102.32	7.76	16.04	0.35	4.12	34.97	0.62
	Median	0.28	2.10	10.67	100.95	7.35	12.15	0.35	0.71	34.42	0.49
Malahide (BM220)	28/02/2024	< 0.02	1.5	11.92	101.3	7.6	8.3	< 0.5	2.10	31.93	0.50
Malahide (BM220)	06/06/2024	0.52	2.4	10.15	101.9	7.4	14.1	< 0.5	< 1.0	34.25	0.63
Malahide (BM220)	04/09/2024	0.45	3.4	10.94	101.1	7.8	16.4	< 0.5	<1	35	0.51
Malahide (BM220)	12/11/2024	< 0.02	1.5	10.35	99.7	7.3	10.4	< 0.5	<1	35	< 0.5
	Mean	0.41	2.20	10.84	101.00	7.53	12.30	0.35	1.06	34.05	0.50
	95%ile	0.54	3.25	11.77	101.81	7.77	16.06	0.35	1.89	35.00	0.61
	Median	0.49	1.95	10.65	101.20	7.50	12.25	0.35	0.71	34.63	0.51
Malahide (BM230)	28/02/2024	0.02	2.0	11.74	100.4	7.3	8.7	< 0.5	2.79	36.67	< 0.50
Malahide (BM230)	06/06/2024	0.48	1.9	10.31	102.8	7.1	14.2	< 0.5	1.19	34.17	0.59
Malahide (BM230)	04/09/2024	0.43	4.3	10.94	100.4	7.8	16.4	< 0.5	< 1	35	0.49
Malahide	04/03/2024	0.43	4.0	10.34	100.4	7.0	10.4	\U. 3	~1	33	0.43
(BM230)	12/11/2024	< 0.02	6.4	10.37	99.2	7.4	10.4	< 0.5	< 1	35	< 0.5
	Mean	0.27	3.65	10.84	100.70	7.40	12.43	0.35	1.35	35.21	0.45
	95%ile	0.47	6.09	11.62	102.44	7.74	16.07	0.35	2.55	36.42	0.58
	Median	0.29	3.15	10.66	100.40	7.35	12.30	0.35	0.95	35.00	0.42

Shore Monitoring Data – Samples Tested at DCC Central Lab

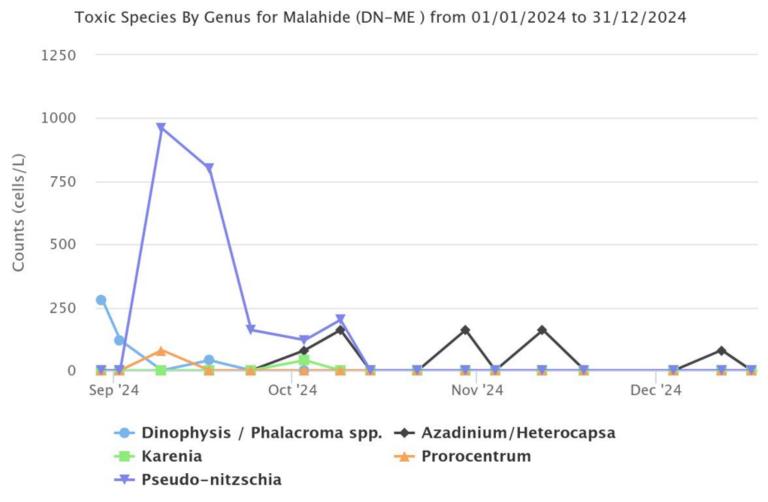
Location	Date	Date	Sample	E. coli	Enterococci	Floating	Mineral Oil	pН	Phenols Olfactory	Salinity	Surfactants	Visual Inspection
			MPN/100ml	CFU/100ml	Materials	(visual)			PSU			
(49915) Malahide Beach	22/05/2024 11:30	2210272	<10	7	Absent	Absent	8.1	Absent	32.9	Absent	Normal	
(49915) Malahide Beach	04/06/2024 12:00	2214409	20	9	Absent	Absent	8.1	Absent	33.6	Absent	Normal	
(49915) Malahide Beach	17/06/2024 07:10	2218767	63	7	Absent	Absent	8.1	Absent	33.6	Absent	Normal	
(49915) Malahide Beach	01/07/2024 06:50	2224079	20	8	Absent	Absent	8.1	Absent	33.6	Absent	Normal	
(49915) Malahide Beach	15/07/2024 16:40	2229782	<10	<1	Absent	Absent	8.2	Absent	33.0	Absent	Normal	
(49915) Malahide Beach	31/07/2024 08:05	2235120	<10	1	Absent	Absent	8.1	Absent	33.5	Absent	Normal	
(49915) Malahide Beach	12/08/2024 08:15	2238948	20	19	Absent	Absent	8.1	Absent	33.7	Absent	Normal	
(49915) Malahide Beach	26/08/2024 08:00	2244112	327	46	Absent	Absent	8	Absent	33.3	Absent	Normal	
(49915) Malahide Beach	11/09/2024 08:00	2250257	41	8	Absent	Absent	8.1	Absent	33.8	Absent	Normal	

Marine Institute Biotoxin Data 2024

Sample Date	Sampling Point	Species	Tissue	ASP	AZP	DSP	YTX
06/12/2024	Malahide (DN-ME-ME)	Ensis siliqua	Whole	N.D.	<lod< td=""><td><lod< td=""><td><lod< td=""></lod<></td></lod<></td></lod<>	<lod< td=""><td><lod< td=""></lod<></td></lod<>	<lod< td=""></lod<>
13/11/2024	Malahide (DN-ME-ME)	Ensis siliqua	Whole	N.D.	<lod< td=""><td><lod< td=""><td><lod< td=""></lod<></td></lod<></td></lod<>	<lod< td=""><td><lod< td=""></lod<></td></lod<>	<lod< td=""></lod<>
12/10/2024	Malahide (DN-ME-ME)	Ensis siliqua	Whole	N.D.	<lod< td=""><td><lod< td=""><td><lod< td=""></lod<></td></lod<></td></lod<>	<lod< td=""><td><lod< td=""></lod<></td></lod<>	<lod< td=""></lod<>
17/09/2024	Malahide (DN-ME-ME)	Ensis siliqua	Whole	N.D.	<lod< td=""><td><lod< td=""><td><lod< td=""></lod<></td></lod<></td></lod<>	<lod< td=""><td><lod< td=""></lod<></td></lod<>	<lod< td=""></lod<>
02/09/2024	Malahide (DN-ME-ME)	Ensis siliqua	Whole	N.D.	<lod< td=""><td><lod< td=""><td><lod< td=""></lod<></td></lod<></td></lod<>	<lod< td=""><td><lod< td=""></lod<></td></lod<>	<lod< td=""></lod<>
30/08/2024	Malahide (DN-ME-ME)	Ensis siliqua	Whole	N.D.	<lod< td=""><td><lod< td=""><td><lod< td=""></lod<></td></lod<></td></lod<>	<lod< td=""><td><lod< td=""></lod<></td></lod<>	<lod< td=""></lod<>

(Source: https://webapps.marine.ie/HABs/AreaSummary/Inshore/44)

Marine Institute Phytoplankton Data 2024



Highcharts.com

(Source: https://webapps.marine.ie/HABs/AreaSummary/Inshore/44)

Sample Date	Sampling Point	Species	Cells/Litre
17/12/2024	Malahide (DN-ME-ME)	Centric diatom	Present
17/12/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
17/12/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
17/12/2024	Malahide (DN-ME-ME)	Skeletonema spp.	Present
12/12/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
12/12/2024	Malahide (DN-ME-ME)	Azadinium/heterocapsa spp.	80
12/12/2024	Malahide (DN-ME-ME)	Bacillaria spp.	Present
12/12/2024	Malahide (DN-ME-ME)	Centric diatom	Present
12/12/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
		Cylindrotheca closterium/ Nitzschia	
12/12/2024	Malahide (DN-ME-ME)	longissima	Present
12/12/2024	Malahide (DN-ME-ME)	Dictyocha fibula	40
12/12/2024	Malahide (DN-ME-ME)	Fragilaria spp.	Present
12/12/2024	Malahide (DN-ME-ME)	Microflagellate spp.	Present
12/12/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
12/12/2024	Malahide (DN-ME-ME)	Paralia sulcata	Present
12/12/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
12/12/2024	Malahide (DN-ME-ME)	Skeletonema costatum	Present
12/12/2024	Malahide (DN-ME-ME)	Stephanopyxis sp	Present
12/12/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
04/12/2024	Malahide (DN-ME-ME)	Bacillaria spp.	Present
04/12/2024	Malahide (DN-ME-ME)	Campylodiscus spp.	Present
04/12/2024	Malahide (DN-ME-ME)	Centric diatom	Present
04/12/2024	Malahide (DN-ME-ME)	Ditylum brightwellii	Present
04/12/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
04/12/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
04/12/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
19/11/2024	Malahide (DN-ME-ME)	Bacillaria spp.	Present

Sample Date	Sampling Point	Species	Cells/Litre
19/11/2024	Malahide (DN-ME-ME)	Centric diatom	Present
19/11/2024	Malahide (DN-ME-ME)	Gyrodinium spp.	Present
19/11/2024	Malahide (DN-ME-ME)	Lauderia / Detonula sp	Present
19/11/2024	Malahide (DN-ME-ME)	Odontella sinensis	Present
19/11/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
19/11/2024	Malahide (DN-ME-ME)	Porosira glacialis	Present
19/11/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
19/11/2024	Malahide (DN-ME-ME)	Rhizosolenia spp.	Present
19/11/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
12/11/2024	Malahide (DN-ME-ME)	Azadinium/heterocapsa spp.	160
12/11/2024	Malahide (DN-ME-ME)	Centric diatom	Present
		Cylindrotheca closterium/ Nitzschia	
12/11/2024	Malahide (DN-ME-ME)	longissima	Present
12/11/2024	Malahide (DN-ME-ME)	Euglena/Eutreptiella spp.	Present
12/11/2024	Malahide (DN-ME-ME)	Gymnodinium spp.	Present
12/11/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
12/11/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
12/11/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
12/11/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
12/11/2024	Malahide (DN-ME-ME)	Tintinnids	Present
04/11/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
04/11/2024	Malahide (DN-ME-ME)	Bacillaria spp.	Present
04/11/2024	Malahide (DN-ME-ME)	Centric diatom	Present
04/11/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
04/11/2024	Malahide (DN-ME-ME)	Chaetoceros danicus	80
04/11/2024	Malahide (DN-ME-ME)	Coscinodiscus spp.	Present
		Cylindrotheca closterium/ Nitzschia	
04/11/2024	Malahide (DN-ME-ME)	longissima	Present
04/11/2024	Malahide (DN-ME-ME)	Dactyliosolen fragilissimus	Present

Sample Date	Sampling Point	Species	Cells/Litre
04/11/2024	Malahide (DN-ME-ME)	Dictyocha speculum	40
04/11/2024	Malahide (DN-ME-ME)	Ditylum brightwellii	Present
04/11/2024	Malahide (DN-ME-ME)	Odontella sinensis	Present
04/11/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
04/11/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
04/11/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
04/11/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
30/10/2024	Malahide (DN-ME-ME)	Azadinium/heterocapsa spp.	160
30/10/2024	Malahide (DN-ME-ME)	Bacillaria spp.	Present
30/10/2024	Malahide (DN-ME-ME)	Centric diatom	Present
30/10/2024	Malahide (DN-ME-ME)	Cylindrotheca closterium/ Nitzschia Iongissima	Present
30/10/2024	Malahide (DN-ME-ME)	Lauderia / Detonula sp	Present
30/10/2024	Malahide (DN-ME-ME)	Microflagellate spp.	Present
30/10/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
30/10/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
30/10/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
30/10/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	160
30/10/2024	Malahide (DN-ME-ME)	Tintinnids	Present
22/10/2024	Malahide (DN-ME-ME)	Coscinodiscus spp.	Present
22/10/2024	Malahide (DN-ME-ME)	Cylindrotheca closterium/ Nitzschia longissima	Present
22/10/2024	Malahide (DN-ME-ME)	Ditylum brightwellii	Present
22/10/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
22/10/2024	Malahide (DN-ME-ME)	Paralia sulcata	Present
22/10/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
22/10/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
22/10/2024	Malahide (DN-ME-ME)	Skeletonema costatum	Present
22/10/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present

Sample Date	Sampling Point	Species	Cells/Litre
22/10/2024	Malahide (DN-ME-ME)	Tripos furca	Present
14/10/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
14/10/2024	Malahide (DN-ME-ME)	Centric diatom	Present
		Cylindrotheca closterium/ Nitzschia	
14/10/2024	Malahide (DN-ME-ME)	longissima	Present
14/10/2024	Malahide (DN-ME-ME)	Diploneis spp.	Present
14/10/2024	Malahide (DN-ME-ME)	Grammatophora spp.	Present
14/10/2024	Malahide (DN-ME-ME)	Guinardia delicatula	Present
14/10/2024	Malahide (DN-ME-ME)	Navicula spp.	Present
14/10/2024	Malahide (DN-ME-ME)	Paralia sulcata	Present
14/10/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
14/10/2024	Malahide (DN-ME-ME)	Plagiogrammopsis spp.	Present
14/10/2024	Malahide (DN-ME-ME)	Pleurosigma sp	Present
14/10/2024	Malahide (DN-ME-ME)	Prorocentrum spp.	Present
14/10/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	160
14/10/2024	Malahide (DN-ME-ME)	Tripos furca	Present
09/10/2024	Malahide (DN-ME-ME)	Azadinium/heterocapsa spp.	160
09/10/2024	Malahide (DN-ME-ME)	Cerataulina pelagica	Present
09/10/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Chaetoceros danicus	240
		Cylindrotheca closterium/ Nitzschia	
09/10/2024	Malahide (DN-ME-ME)	longissima	Present
09/10/2024	Malahide (DN-ME-ME)	Diploneis spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Ditylum brightwellii	Present
09/10/2024	Malahide (DN-ME-ME)	Guinardia delicatula	Present
09/10/2024	Malahide (DN-ME-ME)	Heterocapsa triquetra	Present
09/10/2024	Malahide (DN-ME-ME)	Leptocylindrus minimus	Present
09/10/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Paralia sp.	Present

Sample Date	Sampling Point	Species	Cells/Litre
09/10/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
09/10/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
09/10/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
09/10/2024	Malahide (DN-ME-ME)	Protoperidinium bipes	40
09/10/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia seriata complex	200
09/10/2024	Malahide (DN-ME-ME)	Rhizosolenia spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Skeletonema spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Thalassionema spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
09/10/2024	Malahide (DN-ME-ME)	Tripos furca	Present
09/10/2024	Malahide (DN-ME-ME)	Tripos fusus	Present
03/10/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Azadinium/heterocapsa spp.	80
03/10/2024	Malahide (DN-ME-ME)	Centric diatom	Present
03/10/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Chaetoceros (Phaeoceros) spp.	360
		Cylindrotheca closterium/ Nitzschia	
03/10/2024	Malahide (DN-ME-ME)	longissima	Present
03/10/2024	Malahide (DN-ME-ME)	Delphineis surirella	Present
03/10/2024	Malahide (DN-ME-ME)	Guinardia delicatula	Present
03/10/2024	Malahide (DN-ME-ME)	Heterocapsa spp.	160
03/10/2024	Malahide (DN-ME-ME)	Karenia spp.	40
03/10/2024	Malahide (DN-ME-ME)	Leptocylindrus danicus	Present
03/10/2024	Malahide (DN-ME-ME)	Navicula spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Nitzschia spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Paralia sulcata	Present
03/10/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
03/10/2024	Malahide (DN-ME-ME)	Pleurosigma sp	Present

Sample Date	Sampling Point	Species	Cells/Litre
03/10/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
03/10/2024	Malahide (DN-ME-ME)	Protoperidinium bipes	40
03/10/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	80
03/10/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia seriata complex	120
03/10/2024	Malahide (DN-ME-ME)	Rhizosolenia spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Scrippsiella spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
03/10/2024	Malahide (DN-ME-ME)	Tripos furca	Present
03/10/2024	Malahide (DN-ME-ME)	Tripos fusus	Present
03/10/2024	Malahide (DN-ME-ME)	Tripos lineatus	Present
24/09/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Cilliates	Present
24/09/2024	Malahide (DN-ME-ME)	Guinardia delicatula	Present
24/09/2024	Malahide (DN-ME-ME)	Leptocylindrus danicus	Present
24/09/2024	Malahide (DN-ME-ME)	Leptocylindrus minimus	Present
24/09/2024	Malahide (DN-ME-ME)	Licmophora spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Navicula spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
24/09/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
24/09/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia seriata complex	160
24/09/2024	Malahide (DN-ME-ME)	Rhaphoneis spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Rhizosolenia spp.	Present
24/09/2024	Malahide (DN-ME-ME)	Scrippsiella spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Armoured dinoflagellate	Present
17/09/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Chaetoceros danicus	40

Sample Date	Sampling Point	Species	Cells/Litre
17/09/2024	Malahide (DN-ME-ME)	Chaetoceros socialis	Present
17/09/2024	Malahide (DN-ME-ME)	Cilliates	Present
17/09/2024	Malahide (DN-ME-ME)	Corethron hystrix	Present
17/09/2024	Malahide (DN-ME-ME)	Coscinodiscus spp.	Present
		Cylindrotheca closterium/ Nitzschia	
17/09/2024	Malahide (DN-ME-ME)	longissima	Present
17/09/2024	Malahide (DN-ME-ME)	Dinophysis spp.	40
17/09/2024	Malahide (DN-ME-ME)	Diplopsalis spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Ditylum brightwellii	Present
17/09/2024	Malahide (DN-ME-ME)	Gyrodinium spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Herdmania litoralis	Present
17/09/2024	Malahide (DN-ME-ME)	Heterocapsa spp.	480
17/09/2024	Malahide (DN-ME-ME)	Leptocylindrus danicus	Present
17/09/2024	Malahide (DN-ME-ME)	Melosira spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Noctiluca scintillans	400
17/09/2024	Malahide (DN-ME-ME)	Oblea spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Odontella sinensis	Present
17/09/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
17/09/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
17/09/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
17/09/2024	Malahide (DN-ME-ME)	Protoperidinium brevipes	80
17/09/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	1520
17/09/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia delicatissima complex	400
17/09/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia seriata complex	400
17/09/2024	Malahide (DN-ME-ME)	Rhizosolenia spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Scrippsiella spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Thalassionema spp.	Present
17/09/2024	Malahide (DN-ME-ME)	Tintinnids	Present
17/09/2024	Malahide (DN-ME-ME)	Tripos furca	Present

Sample Date	Sampling Point	Species	Cells/Litre
17/09/2024	Malahide (DN-ME-ME)	Tripos macroceros	Present
09/09/2024	Malahide (DN-ME-ME)	Amphiprora spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Bacillaria spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Chaetoceros (Hyalochaete) spp.	Present
		Cylindrotheca closterium/ Nitzschia	
09/09/2024	Malahide (DN-ME-ME)	longissima	Present
09/09/2024	Malahide (DN-ME-ME)	Ditylum brightwellii	Present
09/09/2024	Malahide (DN-ME-ME)	Guinardia delicatula	Present
09/09/2024	Malahide (DN-ME-ME)	Lauderia / Detonula sp	Present
09/09/2024	Malahide (DN-ME-ME)	Leptocylindrus danicus	Present
09/09/2024	Malahide (DN-ME-ME)	Licmophora spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Meuniera membranacea	Present
09/09/2024	Malahide (DN-ME-ME)	Odontella spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Paralia sulcata	Present
09/09/2024	Malahide (DN-ME-ME)	Pennate diatom	Present
09/09/2024	Malahide (DN-ME-ME)	Pleurosigma sp	Present
09/09/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
09/09/2024	Malahide (DN-ME-ME)	Prorocentrum lima	80
09/09/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	120
09/09/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia delicatissima complex	160
09/09/2024	Malahide (DN-ME-ME)	Pseudo-nitzschia seriata complex	800
09/09/2024	Malahide (DN-ME-ME)	Rhizosolenia spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Scrippsiella spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Skeletonema costatum	Present
09/09/2024	Malahide (DN-ME-ME)	Stephanopyxis sp	Present
09/09/2024	Malahide (DN-ME-ME)	Tabellaria spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Thalassionema spp.	Present
09/09/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present

Sample Date	Sampling Point	Species	Cells/Litre
		Cylindrotheca closterium/ Nitzschia	
02/09/2024	Malahide (DN-ME-ME)	longissima	Present
02/09/2024	Malahide (DN-ME-ME)	Dinoflagellate cyst	Present
02/09/2024	Malahide (DN-ME-ME)	Dinophysis acuminata	80
02/09/2024	Malahide (DN-ME-ME)	Gymnodinium spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Gyrodinium spirale	240
02/09/2024	Malahide (DN-ME-ME)	Herdmania litoralis	Present
02/09/2024	Malahide (DN-ME-ME)	Heterocapsa spp.	40
02/09/2024	Malahide (DN-ME-ME)	Karlodinium spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Katodinium spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Mesodinium rubrum	Present
02/09/2024	Malahide (DN-ME-ME)	Microflagellate spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Navicula spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Oxytoxum spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Paralia sp.	Present
02/09/2024	Malahide (DN-ME-ME)	Phalacroma sp.	40
02/09/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
02/09/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	200
02/09/2024	Malahide (DN-ME-ME)	Skeletonema costatum	Present
02/09/2024	Malahide (DN-ME-ME)	Tabellaria spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Thalassiosira spp.	Present
02/09/2024	Malahide (DN-ME-ME)	Torodinium robustum	Present
02/09/2024	Malahide (DN-ME-ME)	Tripos furca	Present
02/09/2024	Malahide (DN-ME-ME)	Tripos fusus	Present
02/09/2024	Malahide (DN-ME-ME)	Tripos lineatus	Present
02/09/2024	Malahide (DN-ME-ME)	Tripos macroceros	Present
02/09/2024	Malahide (DN-ME-ME)	Tripos muelleri	Present
02/09/2024	Malahide (DN-ME-ME)	Tripos pentagonus	Present
30/08/2024	Malahide (DN-ME-ME)	Centric diatom	Present

Sample Date	Sampling Point	Species	Cells/Litre
30/08/2024	Malahide (DN-ME-ME)	Cilliates	Present
		Cylindrotheca closterium/ Nitzschia	
30/08/2024	Malahide (DN-ME-ME)	longissima	Present
30/08/2024	Malahide (DN-ME-ME)	Gymnodinium spp.	Present
30/08/2024	Malahide (DN-ME-ME)	Gyrodinium spirale	40
30/08/2024	Malahide (DN-ME-ME)	Gyrodinium spp.	Present
30/08/2024	Malahide (DN-ME-ME)	Herdmania litoralis	Present
30/08/2024	Malahide (DN-ME-ME)	Heterocapsa spp.	120
30/08/2024	Malahide (DN-ME-ME)	Microflagellate spp.	Present
30/08/2024	Malahide (DN-ME-ME)	Naked dinoflagellate	Present
30/08/2024	Malahide (DN-ME-ME)	Pediastrum spp.	Present
30/08/2024	Malahide (DN-ME-ME)	Phaeocystis spp. (colonies)	40
30/08/2024	Malahide (DN-ME-ME)	Phalacroma rotundatum	280
30/08/2024	Malahide (DN-ME-ME)	Pleurosigma/Gyrosigma	Present
30/08/2024	Malahide (DN-ME-ME)	Prorocentrum micans	Present
30/08/2024	Malahide (DN-ME-ME)	Protoperidinium brevipes	520
30/08/2024	Malahide (DN-ME-ME)	Protoperidinium spp.	40
30/08/2024	Malahide (DN-ME-ME)	Skeletonema spp.	Present
30/08/2024	Malahide (DN-ME-ME)	Tintinnids	Present
30/08/2024	Malahide (DN-ME-ME)	Torodinium robustum	Present
30/08/2024	Malahide (DN-ME-ME)	Tripos furca	Present
30/08/2024	Malahide (DN-ME-ME)	Tripos fusus	Present
30/08/2024	Malahide (DN-ME-ME)	Tripos macroceros	Present