

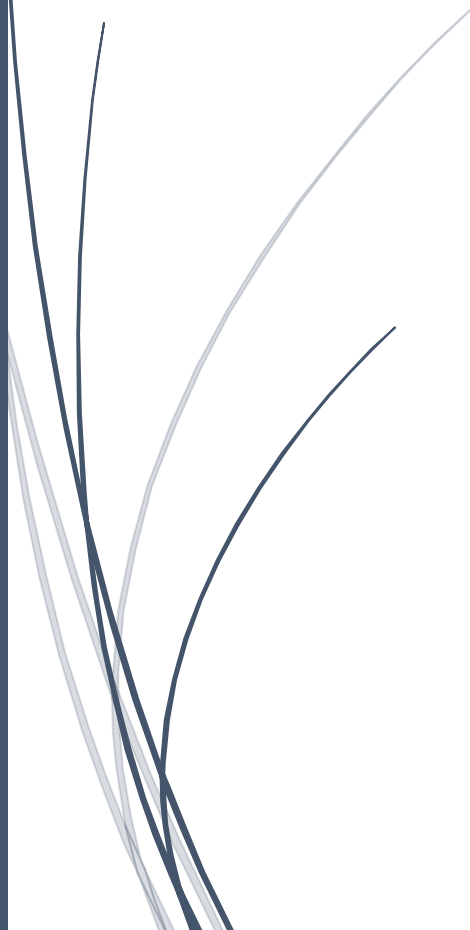


Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council

November 2021

2021 Bathing Season Report

Protection of Water-bodies Office
Environmental Protection Division
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2021 Bathing Water Summary Report

1. Introduction





Dublin City Council (DCC) manages and monitors water quality at six bathing water locations. This customer service is delivered by the Environmental Protection Division, in accordance with the *Bathing Water Regulations SI 79 of 2008*. Dollymount and Sandymount Strands are designated bathing waters, the North Bull Wall, Half Moon, Shelley Banks and Merrion Strand are recognised by the Environmental Protection Agency as other monitored waters.

The bathing season is defined by the Regulations as the period between June 1st to September 15th each year. During this period, irrespective of designation, DCC samples all six bathing locations on at least twenty separate occasions. In advance of the season, a sampling schedule is agreed with the Environmental Protection Agency. Investigative samples throughout the season further supplement the planned sampling events.

DCC monitors bathing water quality all year round, with water quality monitored on a fortnightly basis outside of the season. Results of all sampling events are available in both hard and softcopy formats. Hardcopy results are available to view in designated cabinets located at the entrance to each bathing location. Softcopy results are available on the Dublin City Council website, at the following link www.dublincity.ie/bathingwater.

2. 2021 scheduled bathing water quality results

Bathing water results can be classified as Excellent, Good, Sufficient or Poor. Bacteria results are compared against predefined thresholds to determine the appropriate classification, as illustrated in the table below.

	Indicates excellent water quality – Samples should not exceed 250 MPN E. Coli and 100 CFU Intestinal Enterococci per 100 ml.
	Indicates good water quality – Samples should not exceed 500 MPN E. Coli and 200 CFU Intestinal Enterococci per 100 ml.
	Indicates sufficient water quality - samples should not exceed 1,000 MPN E. coli and 250 CFU Intestinal Enterococci per 100 ml
	Indicates poor water quality - samples exceed 1,000 MPN E. coli and 250 CFU Intestinal Enterococci per 100 ml
Date*	Additional Investigative Sampling carried out

MPN = Most Probable Number
CFU = Colony Forming Unit

Table 1 – Classification thresholds

Results of 2021 scheduled samples have been summarised in Figure 1 and Table 2 below. Directional arrows indicate the change in classification trends at designated bathing waters.

Bathing Water	Excellent		Good		Sufficient		Poor	
Dollymount Strand	18	→	-	↓	1	↑	1	↑
Sandymount Strand	14	↓	-	→	1	↑	5	↑
North Bull Wall	14		2		2		2	
Half Moon	20		-		-		-	
Shelly Banks	18		2		-		-	
Merrion Strand	16		-		2		2	

Table 2 – Summary of 2021 bathing season results

DATE OF SAMPLE	2021 (Inside Bathing season)																				
	25/05	08/06	15/06	22/06	27/06	05/07	06/07	13/07	20/07	27/07	03/08	09/08	10/08	18/08	23/08	25/08	01/09	05/09	07/09	15/09	
DOLLYMOUNT	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Orange	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Red
SANDYMOUNT	Blue	Blue	Red	Blue	Blue	Orange	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Red	Blue	Blue	Red	Red	Blue	Red	
MERRION	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Red	Blue	Blue	Blue	Blue	Blue	Orange	Blue	Blue	Red	Blue	Blue	Orange	
SHELLEY BANKS	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Green	Blue	Blue	
HALF MOON	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	
NORTH BULL WALL CAUSEWAY	Blue	Blue	Blue	Blue	Blue	Red	Orange	Blue	Blue	Blue	Blue	Blue	Green	Blue	Orange	Blue	Blue	Green	Blue	Red	

Figure 1 – Summary of 2021 bathing water results available online

When the 2020 and 2021 results were compared, the following observations were found. Dollymount Strand had an increase in both *Sufficient* and *Poor* events by 1 however, the number of *Good* sampling events decreased by 2. The total of *Excellent* events at Dollymount Strand remained unchanged at 18.

Sandymount Strand had an increase in *Poor* events by 4 and *Sufficient* events by 1. The number of *Excellent* events decreased by 5 to a total of 14.

3. Summary of 2021 warnings raised

DCC is proactive in ensuring that we raise the appropriate warnings when a temporary deterioration in bathing water quality has occurred or is predicted to occur. Depending on the incident, warnings can include prior or temporary bathing prohibitions. DCC are required to consult with the Health Service Executive prior to raising or lifting a warning. Table 3 summarises the type, duration and likely cause of warnings raised in 2021.

Start date	End date	Type of warning	Likely cause/s of contamination	Affected Bathing Water
15/06/21	20/06/21	Temporary bathing prohibition	Dog fouling event	Sandymount Strand
05/07/21	12/07/21	Prior Warning	n/a	Sandymount Strand Dollymount Strand
26/07/21	30/07/21	Prior Warning	n/a	Dollymount Strand Sandymount Strand
18/08/21	25/08/21	Temporary bathing prohibition	Storm Water Overflow/Elm Park Stream/ Dog Fouling event	Sandymount Strand
22/08/21	25/08/21	Precautionary temporary bathing prohibition	Storm Water Overflow	Dollymount Strand
02/09/21	09/09/21	Temporary bathing prohibition	Elm Park Stream/Dog fouling event	Sandymount Strand
15/09/21	22/09/21	Temporary bathing prohibition	Dog fouling event	Sandymount Strand
15/09/21	22/09/21	Temporary bathing prohibition	Dog fouling event	Dollymount Strand

Table 3 – Summary of temporary prohibitions and prior warnings raised in 2021

While storm water overflows and contaminated streams remain pressures on bathing water quality, dog fouling events have proved to be a significant pressure and root cause of many bathing water failures and prohibitions during the season. See Section 4 for more details.

4. PCR testing 2021

Since 2020, Dublin City Council, in collaboration with the UCD School of Biomolecular and Biomedical Science, has included novel testing methodologies as part of its investigative monitoring programme to differentiate between faecal contamination of human and animal origin. This information has been particularly useful in identifying possible sources of pollution not attributable to the drainage infrastructure system.

Both humans and animals, including marine birds, have gut bacteria which are specific to the species. By identifying and quantifying these bacteria it is possible to determine whether the source of faecal contamination might be attributable to human or non-human sources (or a combination of both).

Polymerase Chain Reaction or PCR testing allows this determination to be completed by looking for species specific genetic markers. During the bathing season samples were taken to identify human, canine and marine bird markers. This work was investigative and complemented the scheduled monitoring programme.

This valuable additional information has allowed DCC to identify the likely source of a pollutant when we receive an unexpected poor or failed assessment of our bathing waters.

A review of 2021 PCR analysis carried out by University College Dublin, indicated that the dog faeces marker was the most frequently detected and quantified faeces marker and at times reached very high levels. While dog fouling was known to be a pressure on water quality, the true extent of its proliferation and damage has been highlighted via PCR analysis. A summary of PCR analysis is illustrated in the below table.

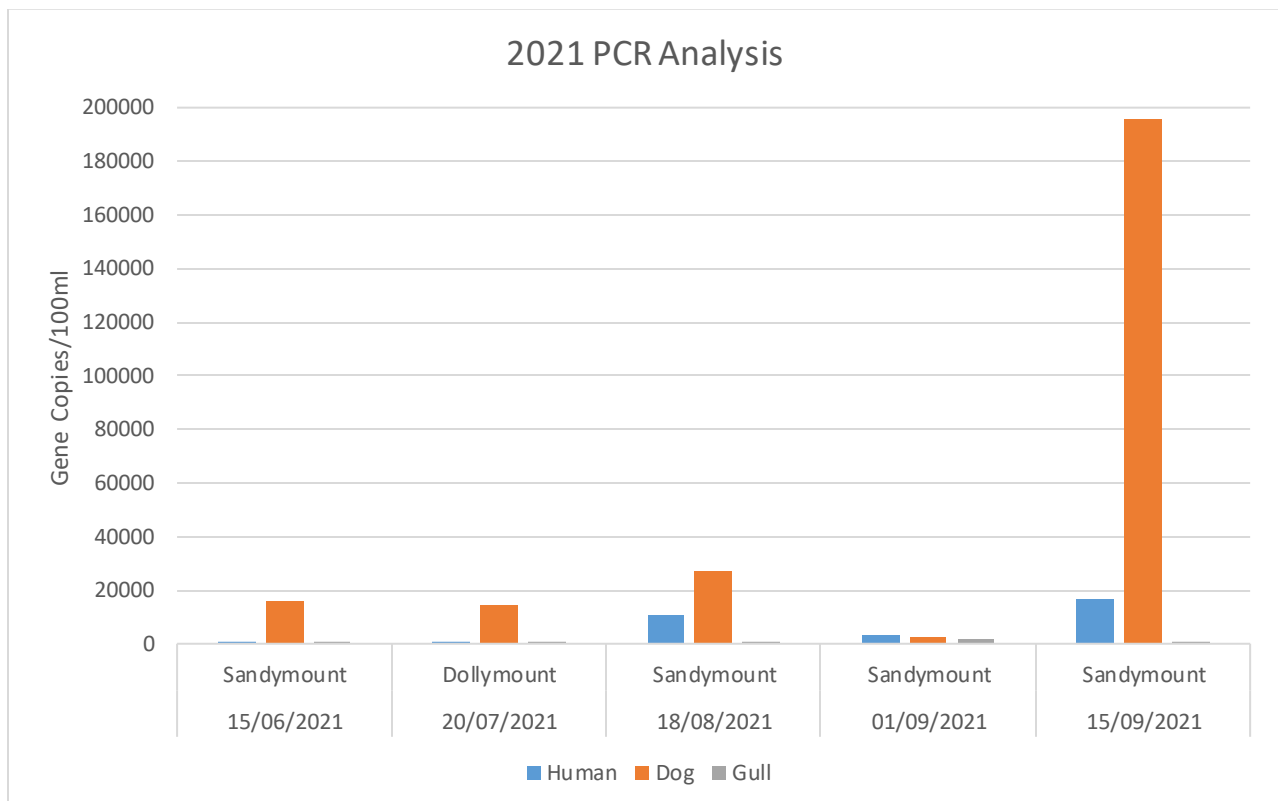


Table 4 – Summary of PCR results

Dog fouling is unlike other water quality pressures, it is easily remediated and wholly preventable. DCC encourages all dog walkers to pick up after their pet, especially on the beach. Further information on the impact dog fouling has on bathing water quality is available at the following link - <https://www.dublincity.ie/residential/environment/water-and-wastewater/water-pollution-control/water-pollution-control-reports>.

5. Communications with stakeholders

Dublin City Councils website was recently updated to improve customer navigation and experience. A FAQ section was introduced to the bathing water webpage, to address most commonly received queries. The webpage also includes links to relevant water quality reports, publications and media releases.

The section liaised with the following stakeholders throughout the 2021 bathing season.

Stakeholder	Communication
Irish Water	Wastewater reportable incidents
HSE	Consultation throughout bathing season
EPA	Reporting of bathing water incidents via BWIS which populates information for the EPA national bathing water website www.beaches.ie
Councillors	7 councillor questions and 4 motions tabled in relation to bathing waters
Public	Statutory information provided in designated bathing water cabinets. Bathing water results available online at www.dublincity.ie/bathingwaters
Public	75 correspondences received during the season
Public participation	Public participation held between May 13 th and June 30 th 2021. Newspaper notice published in the Irish Independent by the LGMA on 17/05/21.

Table 5 – Breakdown of communication by stakeholder

6. Forecasted designated bathing water classification

The EPA provide bathing water classifications to designated locations before the 31st December each year. The classification is based on water quality results over the previous four bathing seasons. The bathing water can receive a classification as Excellent, Good, Sufficient or Poor. The below table details the current and predicted 2021 classification based on the 95th (*) and 90th (**) percentile results as set out in Schedule 4 of the bathing water regulations, <https://www.irishstatutebook.ie/eli/2008/si/79/made/en/print>.

Designated Bathing Water	Current Classification	Predicted 2021 classification
Sandymount Strand	Sufficient	Sufficient**
Dollymount Strand	Good	Good*

Table 6 – Current and predicted classification