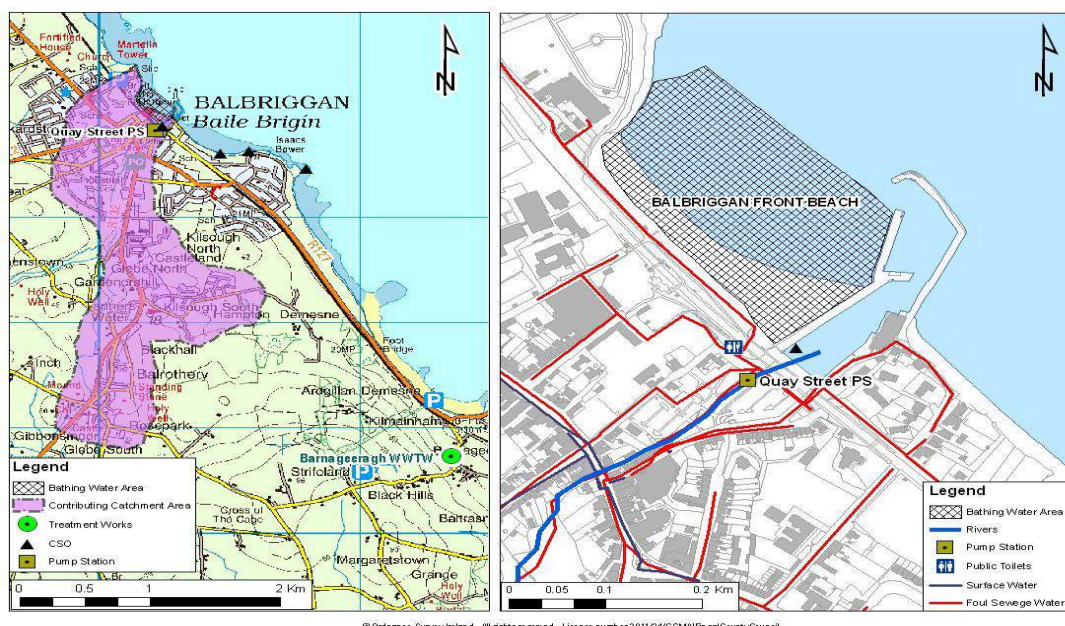



Fingal County Council

Bathing Water Management Plan for Front Strand Beach, Balbriggan



Map 1: Location and Extent of Front Strand, Balbriggan bathing water

Bathing Water Name	Front Strand Beach, Balbriggan
County	Dublin
River Basin District	Eastern River Basin District
Bathing Water ID (as per the WFD)	IEEABWC020_0000_0600
Year of Designation	1996
Location of Sampling Point incl. 6 digit grid ref	320340E, 264059N 
Responsible Authority	Fingal County Council
Responsible Authority	Fingal County Council

Status	Date	Prepared by	Reviewed by	Approved by
draft	27/01/21	Rita McGrath	Mortimer Loftus	James Walls
Final	29/01/21	Rita McGrath		James Walls

1.0 INTRODUCTION: EPA GUIDANCE ON MANAGEMENT OF POOR BATHING WATERS

Guidance was issued by the EPA to inform Fingal County Council of the

- *Legislative requirements to be undertaken following the classification of a bathing water as **Poor** and*
- *The management approach to be undertaken to improve the water quality of a Poor bathing water.*

The guidance advised that the management plan needs to address the following:

- a. **Local authority confirms** that there is a requirement for the bathing water to remain as identified bathing water
- b. **Local authority informs** of its decision on the **type of seasonal bathing restriction**, i.e. advice against bathing or bathing prohibition, to be issued at the Poor bathing water for the following season. The local authority's decision on the type of seasonal bathing restriction to issue at the Poor bathing water should be based on ensuring adequate bather protection.
- c. The **cause(s) of pollution** affecting the bathing water are clearly identified. Where causes of pollution require further investigation provide relevant details and timelines for completion of this task.
- d. The **measures**, including interim actions, proposed to prevent, reduce or eliminate the causes of pollution. Details of the measures proposed, timelines and responsible authority will need to be provided.
- e. Local authority **strategy for communicating** to the public (in addition to notice at the bathing water) of the:
 - *causes and reasons for Poor classification of the bathing water,*
 - *measures being undertaken and planned to improve the water quality of the bathing water*
 - *implications for bather health*
 - *where/who to contact for more information.*

2.0 DESCRIPTION OF BATHING WATER

Front Strand Beach is located in Balbriggan town which is situated in Fingal, North County Dublin. The beach is approx. 35km from Dublin City Centre.

Balbriggan Front Beach lies adjacent to Balbriggan Harbour. The Matt River (known locally as the Bracken River) discharges through the harbour, immediately south of the identified bathing area. Visitors access the beach by passing under an arch limestone and brick railway viaduct.

Balbriggan Front Beach is approximately 350m wide and 0.06 sq. km in area. Balbriggan Front Beach is a small flat sandy beach, sloping gently towards the sea. The adjacent harbour is a working fishing harbour. There is a rocky shore to the north of the identified beach.

A more detailed description of the bathing water and contributing catchment and pressures can be found in the Front Strand Beach, Balbriggan bathing water profile on the EPA's Beaches.ie website.

Fingal County Council confirms that Front Strand, Balbriggan bathing water will remain as an Identified Bathing Water for 2021.

3.0 DESCRIPTION OF THE CONTRIBUTING CATCHMENT

Land use in the contributing catchment area consists of industrial, commercial and residential elements, including Balrothery village and Balbriggan town.

Balbriggan Front Beach is located in the Nanny-Delvin catchment area. The main surface water body is the Bracken (Matt) River and its catchment is approximately 28 sq. km. in area. The contributing catchment for Balbriggan Front Beach is limited to Balbriggan and Balrothery areas.

The Bracken (Matt) River is the main water body discharging adjacent to the bathing area. The river discharges to the harbour at the south end of Balbriggan Front Beach. There is no surface water discharge directly to the beach.

4.0 BATHING WATER QUALITY ASSESSMENT

4.1 Bathing Water Regulations 2008

The Bathing Water Regulations 2008 specifies that two parameters *Escherichia coli* and *Intestinal enterococci* are monitored at identified bathing waters throughout the bathing season. Laboratory reported bacterial counts from samples taken during the bathing season define water quality. Table 1 provides an explanation of water quality for each of these parameters.

Parameter	Excellent Quality	Good Quality	Sufficient Quality
<i>Escherichia coli</i> (mpn/100ml)	250(*)	500(*)	500(**)
<i>Intestinal enterococci</i> (cfu/100ml)	100(*)	200(*)	185(**)

Table 1 Water Quality as per Bathing Water Regulations

(*) Based upon a 95-percentile evaluation

(**) Based upon a 90-percentile evaluation

The classification of water quality status for Front Strand, Balbriggan for the period 2017-2020 is as follows:

2017 - Sufficient

2018 – Sufficient

2019 – Sufficient

2020 – Sufficient

4.2 Bathing Water Quality 2017-2020

Bathing Water Quality data collected for Front Strand, Balbriggan beach has been compared to the in-season single sample status assessment limits (Refer to Table 2). These limits are for informational purposes throughout the bathing season only. The annual classification is based on a 4 year assessment (Refer to Section 4.1).

Parameter	Excellent	Good	Sufficient	Poor
Intestinal enterococci	≤ 100	101 - 200	201 - 250	>250
Escherichia coli	≤ 250	251 - 500	501 - 1000	>1000

Table 2 Single Sample Limits for In-Season Water Quality Status Assessment

Bathing Water Quality data which has been collected for Front Strand, Balbriggan beach and is compared to the single sample status assessment limits is presented in Table 2 (Source: www.beaches.ie).

Date	Eschericia Coli	Intestinal Enterococci	Sample Status*	Quality
1/9/2020	121	12	Excellent	
25/8/2020	7701	2000	Poor	
11/8/2020	110	210	Sufficient	
27/7/2020	109	29	Excellent	
13/7/2020	62	4	Excellent	
29/6/2020	171	66	Excellent	
15/6/2020	10	2	Excellent	
2/6/2020	10	1	Excellent	
25/5/2020	10	1	Excellent	
09/09/2019	771	480	Poor	
26/08/2019	331	88	Good	
12/08/2019	836	270	Poor	
29/07/2019	31	13	Excellent	
15/07/2019	31	38	Excellent	
01/07/2019	10	7	Excellent	
17/06/2019	52	11	Excellent	
11/06/2019	10	12	Excellent	
28/05/2019	10	23	Excellent	
5/09/2018	148	15	Excellent	
20/08/2018	1274	170	Poor	
7/08/2018	857	85	Poor	
23/07/2018	109	24	Excellent	
9/07/2018	52	14	Excellent	
25/06/2018	52	7	Excellent	
11/06/2018	52	29	Excellent	
6/06/2018	148	44	Excellent	
23/05/2018	31	6	Excellent	
04/09/2017	63	13	Excellent	
21/08/2017	63	14	Excellent	

16/08/2017	31	39	Excellent
31/07/2017	41	19	Excellent
18/07/2017	31	52	Excellent
03/07/2017	30	10	Excellent
19/06/2017	134	34	Excellent
06/06/2017	10	17	Excellent
22/05/2017	31	4	Excellent

Table 3 Bathing Water Quality at Front Strand, Balbriggan Beach 2017-2020

*From 2014 onwards bathing water sample results were categorised as 'excellent', 'good', 'sufficient' or 'poor'. Prior to 2014, bathing water sample results were categorised as 'good', 'sufficient' or 'poor'.

4.3 Bathing Water Assessment 2021

In December 2020 the EPA advised that the classification of water quality status for Front Strand, Balbriggan beach for the 2021 bathing season is **Poor** (based on the assessment of 2017-2020 data).

4.4 Seasonal Bathing Restriction for 2021

During the period 2017 – 2020, there were a total of 36 samples analysed for bathing water quality. Of these, 5 were classified as 'Poor', 1 as 'Sufficient', 1 as 'Good' and the remaining 29 samples classified as 'Excellent'.

On the basis of the above results, the A/Principal Environmental Health Officer has agreed with Fingal County Council that an Advisory Notice be placed at the beach for the duration of the bathing season 2021 as a measure to protect bathers' health.

5.0 REVIEW OF POLLUTION SOURCES

The main causes of pollution that may affect the bathing water are outlined in Table 4:

Pressure No	Pressure Source
1	Surface Water Streams within the beach catchment
2	Agricultural run-off
3	Foul water network and Pumpstations
4	Animal Fouling

Table 4 Summary of pressure sources within the catchment posing a quantifiable microbial risk

1. Surface water streams within the beach catchment

There are no direct surface water outfalls onto the beach. However, the Bracken (Matt River) enters Balbriggan Harbour adjacent to the bathing water and there are a number of surface water outfalls to this and these could pose a risk to the bathing water quality due to misconnections into the surface water system discharging to it. Risk is highest after heavy rainfall events.

A report on the assessment of pollution sources within the Bracken (Matt) River was commissioned by the Balbriggan Tidy Towns Committee from CDM Smith in 2020 which will assist in further investigations. E.coli speciation of bathing water (following the "Poor" results in 2020) pointed to a pollutant source of human origin. Combined storm overflows in the catchment may contribute to pollution of streams within the catchment and consequently may affect the bathing water.

2. Agricultural run-off

Poor farming practice may contribute to pollution of streams within the catchment (pasture and mixed farming primarily) and consequently may affect Bracken River and ultimately the bathing water. The risk is highest during intense rainfall events.

3. Foul Sewer Network and Pumpstations

The sewer network at Balbriggan, particularly the older parts of the town in the vicinity the Harbour have been identified in Irish Water's National Sewer Rehabilitation Programme as needing repairs/rehabilitation. The risk of surcharge exists in heavy rain. There are three pumpstations within the catchment. The closest pumpstation to the bathing area is Quay Street pumpstation. This pumps directly to the Dublin Road pumpstation for delivery to Balbriggan WWTP (70,000pe) ref. D0023-01. The Quay Street pumpstation discharges to a storm tank (capacity of 1,500m³) and when it overflows exits into the River Bracken. The River Bracken flows into Balbriggan harbour adjacent to the southern end of the bathing water. Risk of stormwater overflows to bathing water is highest during intense rainfall events.

4. Animal fouling at the beach

Use of the beach by dog and horses and subsequent fouling may pose a risk to bathing water quality. E coli speciation will assist in the evaluation of this risk. Findings to date have identified 'horse marker' as a pollution pressure at this beach.

6.0 PROPOSED MEASURES TO IMPROVE BATHING WATER QUALITY AT FRONT STRAND, BALBRIGGAN BEACH

Details of the proposed measures, timelines and responsible authorities are outlined in Appendix 1.

The programme of measures will be reviewed annually.

7.0 COMMUNICATIONS STRATEGY

Fingal County Council proposes to promote public awareness of the poor status of Front Strand, Balbriggan by implementing those actions as outlined in Table 5. These have been devised in conjunction with the Council's Communications Department. The nominated point of contact for further information is: Executive Scientist, Environment, Climate Action and Active Travel Department, Environment Division, Water Pollution Control Section, Fingal County Council, phone no. 01-8905000.

Item	Description	Action by
1	Place the appropriate <i>EPA-standard poor bathing water template sign for seasonal bathing water restriction</i> with information regarding the causes of the pollution affecting the bathing water and measures taken on the beach notice board	HSE/Environment Division

2	Train lifeguards in the significance of water quality data and providing advice to the public on how to obtain further information	Operations Department and Environment Division
3	Provide information on bathing waters on the EPA's national website; beaches.ie and Fingal Website; www.fingal.ie	Environment Division/Communications Department
4	Direct communications to the Elected Members through the 'Our Balbriggan' project	Environment Division/Operations Department/Economic Development
5	Use social media to circulate updated information and provide information on bathing water results and warning notices to registered users through the Fingal Alerts system	Environment Division/Communications Department
6	General Bathing Water Awareness Programme at the beach (including Dog Warden patrols)	Environment Division/Communications Department

Table 5 Communications Strategy

APPENDIX 1**DETAILS OF PROPOSED MEASURES TO IMPROVE BATHING WATER QUALITY AT
FRONT STRAND, BALBRIGGAN BEACH 2021**

PRESSURE 1 AND 2		SURFACE WATER STREAMS WITHIN THE BEACH CATCHMENT and AGRICULTURAL RUN-OFF	
PRESSURE TYPE	Contaminated Surface Water/Sewage		
Microbial Pollution Potential	HIGH		
Pressure Description	Surface water contaminated by misconnections or poor farming practices discharging onto the beach could pose a risk to bathing water quality.		
	Combined storm overflows in the catchment may also contribute to pollution of streams within the catchment and consequently may affect the bathing water.		
SHORT TERM ACTIONS	Agency responsible	Contact person	Target timeframe
Sampling of bathing water/surface water outfalls to determine water quality and test for pathogen speciation (in particular Bracken River) where identification of the source of pathogens will be investigated (Acclimatize/UCD)). Liaise with Irish Water for possible sources of sewage and field work by Acclimatize/UCD.	Fingal County Council Environment Division	Rita McGrath	Q2 -Q3/2021
Review the 2020 report commissioned by Balbriggan Tidy Towns Committee and produced by CDM Smith on the assessment of pollution sources in the River Bracken e.g. discharges arising from misconnections.	Fingal County Council Environment Division	Rita McGrath/ James Walls	Q1-Q4/2021
Review of network to identify misconnections or infiltration from the foul network, including unknown overflow points. A flow and rainfall survey undertaken by Irish Water in Q4 of 2020 will be utilised for this review.	Irish Water	J. Doran, IW	Q3-Q4/2021
Inspection of farms and farm practices - as directed by LAWPRO	Fingal County Council Environment Division	James Walls	2021
Enforcement action where required.	Fingal County Council Environment Division	James Walls	Q3/Q4/2021

PRESSURE 3	FOUL SEWER NETWORK AND PUMPING STATIONS		
PRESSURE TYPE	Sewage		
Microbial Pollution Potential	MODERATE		
Pressure Description	During overflow, effluent from Pump Station can discharge to the River Bracken and via Harbour to the Irish Sea.		
SHORT TERM ACTIONS	Agency responsible	Contact person	Target timeframe
National Sewer Rehabilitation Programme is being undertaken by Irish Water and includes identified works for the rehabilitation/repair of pipework in Balbriggan including the Harbour area. A workplan has been put in place.	Irish Water	J. Doran, IW	Q1 2021
All pumping stations are on a telemetry system which allows for notification of and rapid response to overflows from the Pumping Stations. There are also frequent inspections and maintenance of equipment at the Pumping Stations.	Fingal County Council Drainage Section	Juliene Helbert	Q2-Q4/2021
PRESSURE 4	ANIMAL FOULING AT THE BEACH		
PRESSURE TYPE	Fouling		
Microbial Pollution Potential	MODERATE		
Pressure Description	Use of the beach by dog walkers and horse riders and subsequent fouling may pose a risk to bathing water quality.		
SHORT TERM ACTIONS	Agency responsible	Contact person	Target timeframe
Public awareness campaign regarding the dangers of animal fouling.	Fingal County Council Environment Division	Michael Campbell	Q2/Q3/2021
Dog warden to target beach for inspections during the Bathing Season.	Fingal County Council Environment Division	Michael Campbell	Q2/Q3/2021
Duplicate sampling of bathing waters for pathogen speciation purposes - as directed by Acclimatize/UCD study	Fingal County Council Environment Division	Rita McGrath	Q2-Q4/2021
Medium term study to establish source of pathogens in Balbriggan catchment with a view to informing future management plans (Acclimatize/UCD)	Fingal County Council Environment Division	Rita McGrath	2017-2021