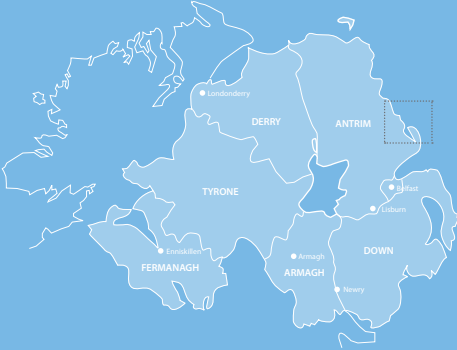


Department of the Environment
Marine Division

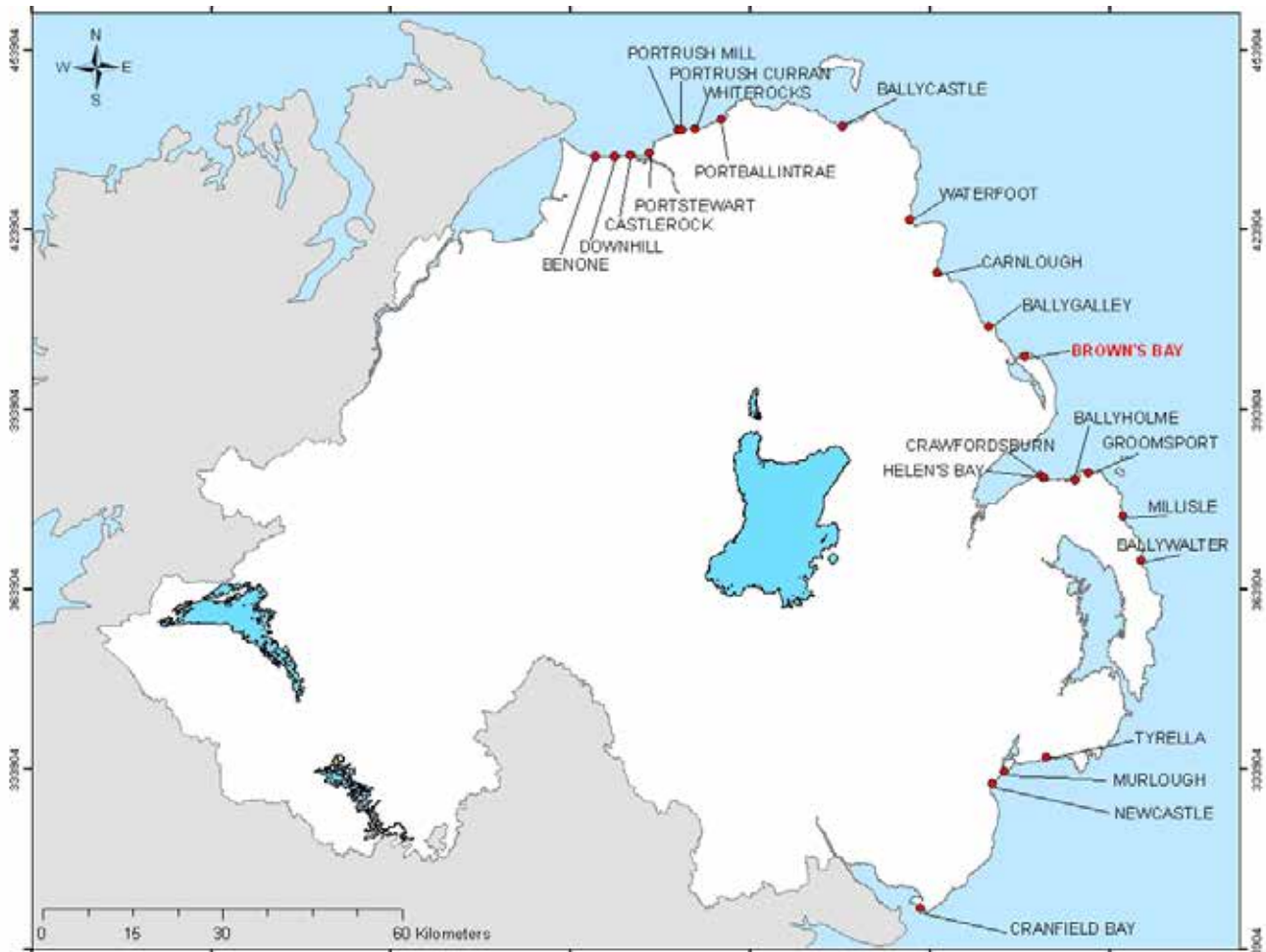
Bathing Water Profile

Brown's Bay

May 2013



Map of Northern Ireland's Bathing Waters 2013



Background to Bathing Water Profiles

This is one of a series of profiles which cover all 23 of Northern Ireland's identified bathing waters. These are the most popular of our bathing areas and have been 'identified' as part of a network of European bathing sites.

The purpose of the bathing water profile is to help the bather to make an informed choice before bathing. The profile gives information on the physical, geographical and hydrological characteristics of the bathing water while assessing the possible pollution risk at the site. Bathing water profiles are a new European requirement, under the 2006 revised Bathing Waters Directive (www.doeni.gov.uk/niea/new-bathing-water-directive). It is our intention to review the profiles annually.

All of our bathing waters are monitored on 20 occasions during the bathing season. In Northern Ireland the season runs between 1st June and 15th September each year. Bathing waters are tested for bacteria which indicate faecal contamination. Results are published weekly to bathing water operators and to the Department of the Environment (DOE) web site. Waters are then classified annually as Excellent, Good or Poor, as defined by the European Bathing Water Directive, 1976.

In effect, this profile reflects a transition from the 1976 Directive to the 2006 Directive which must be fully implemented by 2015.

Key Information

Bathing Water Name	Brown's Bay Bathing Water
EU bathing water ID number	UKNO5_51100
Location	UK/Northern Ireland/County Antrim/Antrim Coast
Year of identification	1993
Local council area	Larne Borough Council
Bathing Water Operator	Larne Borough Council
Description of bathing beach	Sand, approximately 0.6 kilometre in length, bounded by rocks at each end
Monitoring Point	Middle of bathing water, D43540287 (Map 2)

A Description of Brown's Bay bathing water and the surrounding area

Brown's Bay bathing water is located on Islandmagee peninsula, at the most northerly point of Larne Lough. The bathing beach is approximately 0.6 km in length. It is comprised mainly of sand with large rocks and boulders at each end. There is a small sand dune system to the back of the beach and this runs the entire length. Behind the sand dunes a small grassy area leads on to the main road.

A facilities area is located on the other side of the main road with public toilets, car parking and a small caravan park. There are several private houses adjacent to the western end of the bathing water.

The catchment area for this bathing water consists of improved grassland with arable horticulture and grasses. The geology of this region varies, with the Islandmagee / Larne Lough area incorporating igneous and sedimentary rocks of the Triassic and Tertiary age. The Larne Ridgeland is generally cretaceous greensands, limestone or Tertiary basalts.

A small river flows out to sea near the centre of the bathing area. This river flows mainly through farmland. However, there are also a number of private residences within the catchment. There are no towns or villages in the catchment although the town and port of Larne are approximately 2 km to the west, across the mouth of Larne Lough.

Bathing Water Quality History at Brown's Bay

Brown's Bay bathing water was identified in 1993. Monitoring and reporting is carried out by DOE Marine Division. Its history of compliance is displayed below and can also be viewed at www.doeni.gov.uk/niea/bathingqualityni

Brown's Bay Bathing Water Quality 2007-2012



Key: ● Excellent ● Good ● Poor

The 1976 Directive classified bathing waters as Excellent, Good or Poor. In 2006 a new revised Bathing Water Directive replaced the 1976 Directive. Under a new system of bacterial monitoring bathing waters will, from 2015, be judged against more stringent standards and classified as Excellent, Good, Sufficient and Poor. Using the data collated over the past years, predictions have been made of the new water quality classification and can be seen at www.doeni.gov.uk/niea/new-bathing-water-directive. This new system of classification will become 'live' in 2015. DOE Marine Division will continue to display both classifications up until that time, although the old classification results will be based on equivalence calculations from the new measurement methodologies, agreed at a UK level.

All of Northern Ireland's water quality objectives are set out in River Basin Management Plans (www.doeni.gov.uk/niea/wfd) and detailed management activities are published within Local Management Area Plans (which can be viewed through the same link). These encompass agreed overall objectives for water quality including the quality of identified bathing waters.

Potential sources of pollution and measures to reduce the impact at the bathing water

It should be noted that weekly classification at Brown's Bay bathing water is generally Excellent or Good.

The potential sources of pollution have been split into three main categories. These are waste water (sewage) treatment works discharges, waste water systems in urban areas and rural source pollution, including agriculture.

Are there Waste Water Treatment Works in the vicinity of Brown's Bay beach?

A major new waste water treatment facility for the greater Larne area was commissioned in 2008 with a treated effluent discharge approximately 2 km to the west of the Brown's Bay bathing water. The waste water receives tertiary treatment with UV disinfection as the final process.

Are there other risks of pollution from waste water systems?

Although Brown's Bay is in a rural setting, it is very popular with day visitors and the caravan park is regularly busy during the summer months. Within Brown's Bay catchment area there are a number of private septic tanks and these have the potential to contribute to diffuse pollution. In the event of very heavy rainfall a collection system may not be able to deal with all the flow received. A portion of the contents of the collection system may overflow to a waterway under storm conditions. [This is why there is general advice not to bathe during or up to 2 days after such rain.](#)

The municipal collection and treatment of waste water has the potential to cause pollution because all collection systems must be designed to overflow in periods of extreme wet weather or following failure of the pump system. If systems are not designed in that way, then sewers may overflow into residential areas. Within the wider Larne and Islandmagee area there are combined sewer overflows (CSO), emergency overflows and sewage pumping stations (SPS) with associated emergency overflows as shown on Map 1.

In order to reduce the potential for pollution in the water environment from these systems NIEA requires that all current and proposed systems meet the requirements of the Urban Wastewater Treatment Directive (www.doeni.gov.uk/niea/uwwt_gid2_2002.doc) and the Water Framework Directive (WFD) (www.doeni.gov.uk/niea/wfd).

During the expansion of any urban area, there is the potential for misconnections between the sewer system and surface drains, which may allow untreated wastewater to enter the water environment. When these become apparent, NIEA pursues them as pollution incidents.

A further measure in tackling urban pollution is through the use of sustainable urban drainage systems (SUDS), which NIEA encourages through its SUDS Strategy. Other measures include compliance with the Northern Ireland Water Order 1999 and implementation of Pollution Prevention Guidelines (www.doeni.gov.uk/niea/potential-polluters.htm#vehiclewashoperators).

Are there risks from agriculture and rural activities?

Agriculture is a major industry in Northern Ireland and the catchment area of the Brown's Bay bathing water has a significant amount of improved grassland with arable horticulture and grasses. Areas within the catchment where agriculture is the dominant land use may be subjected to inputs from chemical fertilisers and organic wastes which can contribute to pollution problems in the surrounding area. Prolonged periods of rainfall can cause surface runoff of these organic wastes, such as animal slurries, contributing to the bacteria content in the water environment.

The Nitrates Action Programme Regulations (Northern Ireland) 2010 (previously the Nitrates Action Programme Regulations (Northern Ireland) 2006) and the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006 were introduced to improve the use of nutrients on farms and as a result improve water quality throughout Northern Ireland. The effectiveness of these regulations is continually reviewed through monitoring, enforcement and education.

Are there other potential sources of pollution?

Other sources of pollution exist in this bathing area, these include;

- Dogs
- Horses
- Litter
- Fly tipping

All issues have been addressed through local signage to ensure that these controllable causes of pollution do not affect the bacteria content of the water.

NIEA have compiled River Basin Management Plans, these take an integrated approach to the protection, improvement and sustainable use of the water environment. Each plan identifies existing pollution reduction programmes and additional measures which could be implemented to maintain or improve the water quality.

Brown's Bay is located in the North Eastern River Basin Management Plan within the Glens and Rathlin local management plan - further details can be found at www.doeni.gov.uk/niea/glens-and-rathlin_lma_actionplan.pdf.

Is there evidence of short term water pollution events at Brown's Bay?

From 2009-2012 there were four confirmed pollution events within the vicinity. Three of these events occurred during the bathing season and one was the result of a deterioration in bathing water quality.

What should I do if I see a pollution incident?

If you see a water pollution incident, you should immediately contact NIEA through the Emergency Water Pollution Hotline, which is operated 24 hours.

Phone: 0800 807060

When a pollution incident is reported or pollution is found to be affecting the water quality of a bathing water, an immediate investigation is instigated. All possible sources of pollution are checked. In addition, a resample will be collected to monitor whether the beach is still polluted. Bathing waters may be closed (by local authority or controlling body) until the water quality has improved and levels of bacteria are within mandatory standards.

Macro-Algae, Phytoplankton and Cyanobacteria (blue-green algae)

Brown's Bay bathing water is not at risk of a proliferation of macro-algae, phytoplankton or cyanobacteria (blue/green algae).

Daily water quality forecasts

There is presently no facility to predict bathing water quality on a daily basis. However, the general advice remains: do not bathe during or for up to 2 days after heavy rainfall events.

Contact details

For general information about bathing waters:

DOE

Marine Division
17 Antrim Road
Tonagh
Lisburn, BT28 3AL

Email: MarineDivision.InfoRequests@doeni.gov.uk
Phone: 028 9262 3244

Water Pollution 24hr Hotline

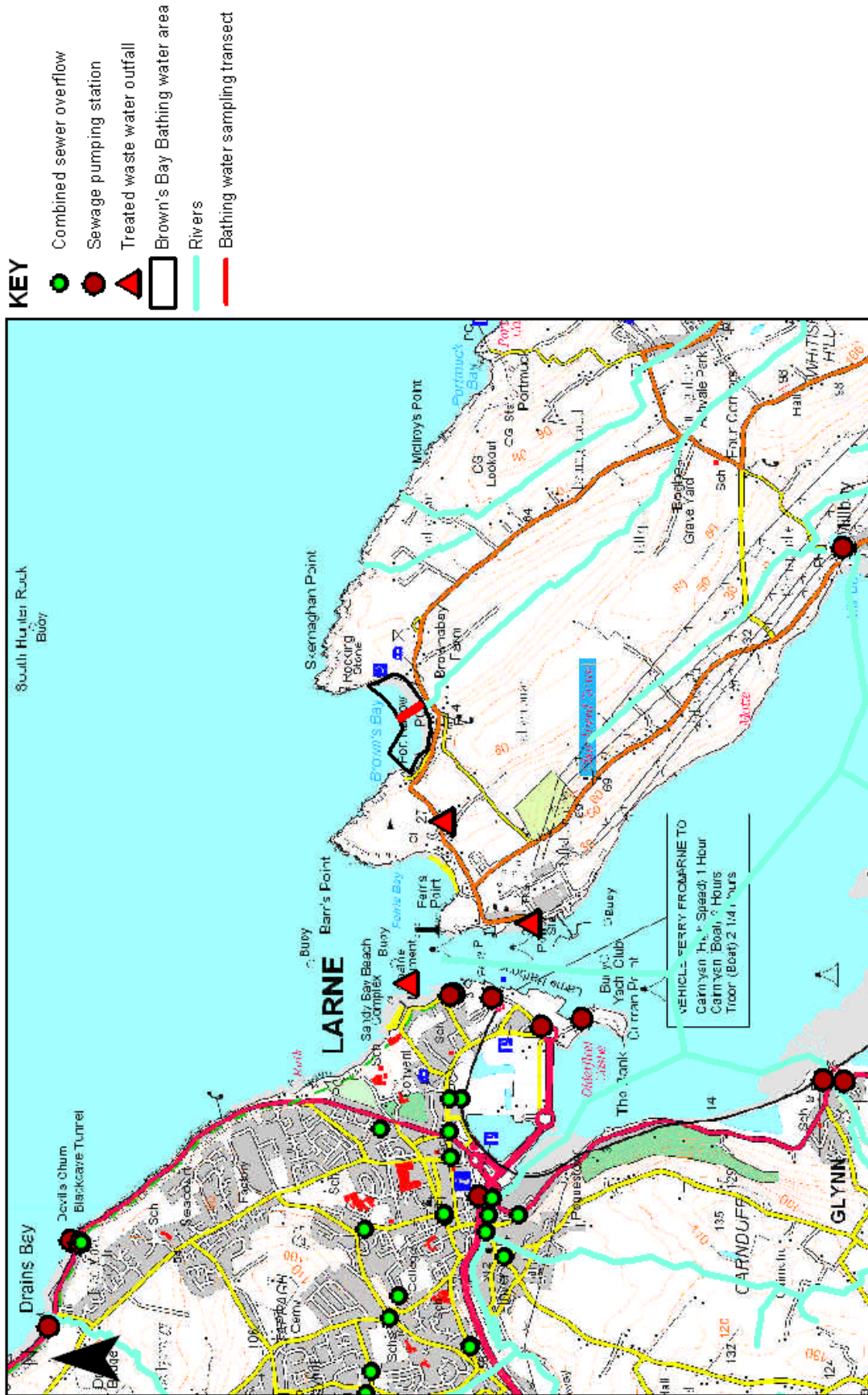
Phone: 0800 807060

Local Authority

Larne Borough Council
Smiley Buildings
Victoria Road
Larne, County Antrim
BT40 1RU

Phone: 028 2827 2313

Map 1
Brown's Bay Bathing Water -
Potential Pollution Sources



Map 2
Brown's Bay Bathing Water -
EC Bathing Water Sample Location





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17 Antrim Road
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