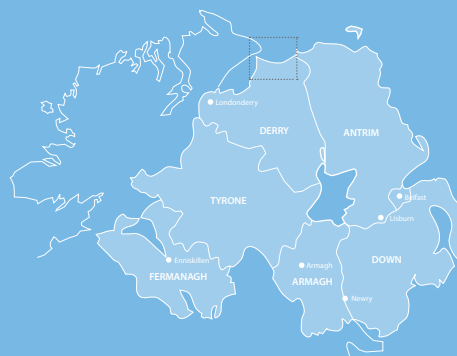


Department of the Environment
Marine Division

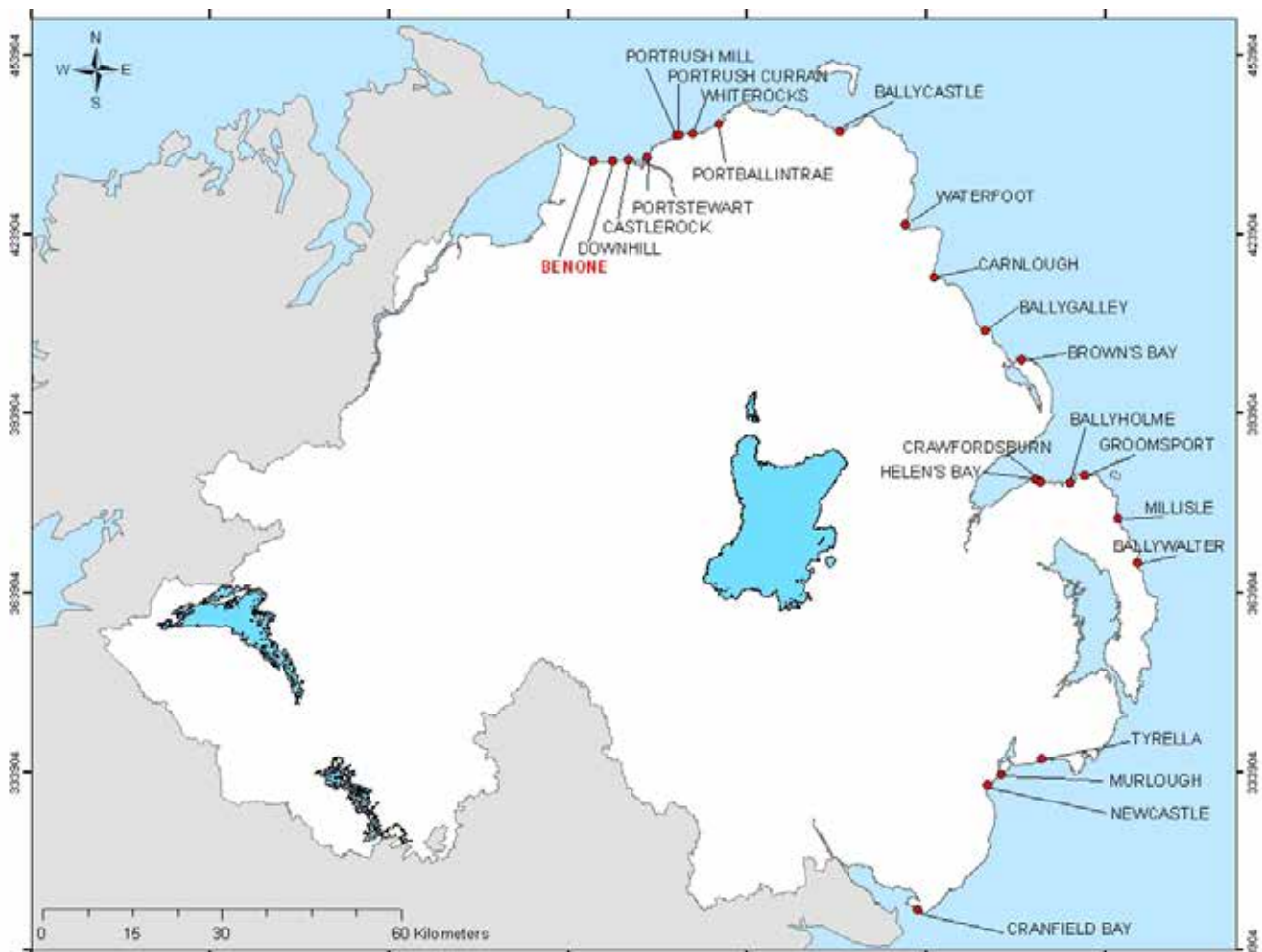
Bathing Water Profile

Benone (Magilligan)

May 2014



Map of Northern Ireland's Bathing Waters 2014



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). 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	Benone (Magilligan) Bathing Water
EU bathing water ID number	UKNO4_46800
Location	UK/Northern Ireland/County Londonderry/North Coast
Year of identification	1993
Local council area	Limavady Borough Council
Bathing Water Operator	Limavady Borough Council
Description of bathing beach	Sand, 4 kilometres in length, contiguous with Downhill Bathing Water
Monitoring Point	End of access road onto beach, C7170 3625 (Map 2)

A Description of Benone bathing water and the surrounding area

Benone is a very popular bathing water and is located near the western end of Northern Ireland's north coast. The beach is contiguous with Downhill bathing water, having a combined length of approximately four kilometres.

The bathing beach is comprised entirely of sand backing onto an extensive well established sand dune system. The beach is the focus of an expansive tourist complex with many facilities provided in the vicinity; these include a caravan park and camping facilities.

The immediate catchment for this bathing water is rural and the main land use agriculture. The catchment consists of improved grassland and arable horticulture. Neutral grass, coniferous forest, acid grass and open dwarf are also present in this area. The main geology in the area is igneous and sedimentary rock of the Triassic, Jurassic and Tertiary age. Within this catchment there is no significant urban settlement. The nearest urban area is the Benone caravan park and tourist complex, which is very busy during the summer months. Castlerock is approximately 5 km away to the east.

There is one minor river, the Umbra, which flows across Benone bathing beach. This river flows through a rural environment and therefore might be influenced by agriculture. Because of the sandy substrate, the exact point where the river flows onto

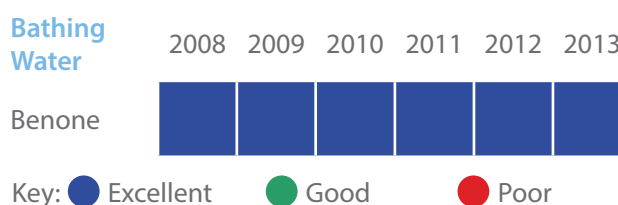
the beach varies from time to time. Another minor river flows out at the adjacent Downhill beach, this may affect the water quality at Benone during periods of heavy rainfall.

As Benone is situated in a very rural part of Northern Ireland there is no major influence from residential areas.

Bathing Water Quality History at Benone

Benone 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

Benone Bathing Water Quality 2008-2013



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. 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 Benone bathing water is generally excellent.

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 Benone beach?

Sewage from the Benone area is treated at the new Magilligan Point WWTW which discharges to the Atlantic Ocean almost 6kms west of the bathing water. This new works treats sewage from Drumavalley, Aughil, MoD Magilligan and HMP Magilligan. Effluent receives tertiary treatment in the form of year round bacterial reduction. There is one small waste water treatment works in the vicinity of Benone bathing water.

Are there other risks of pollution from waste water systems?

Benone beach does not have a large urban area and therefore may not be affected by this source of diffuse pollution. However, the caravan park and toilet facilities have the potential to affect water quality during periods of prolonged or heavy rainfall. In the event of very heavy rainfall a collection system may not be able to deal with all of 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.](#) However, the entire area is sand and it is extremely rare for any surface water to run onto the beach.

The municipal collection and treatment of waste water has the potential to cause pollution because all combined collection systems must be designed to overflow in periods of extreme wet weather or following failure of the system. If systems are not designed in that way, then sewers may overflow into residential areas. Within the Benone area there are sewage pumping stations with associated 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 Benone has a significant amount of improved grassland and arable horticulture. 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 Phosphorous (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.

Septic tanks also have the potential to cause localised pollution, but there is no evidence to suggest that this is impacting Benone bathing water.

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.

Benone is located in the North Western River Basin Management Plan within the Roe local management plan - further details can be found at www.doeni.gov.uk/niea/roe_lma_actionplan.pdf

Is there evidence of short term water pollution events at Benone?

From 2010 - 2013 there were thirteen confirmed incidents of water pollution in the Benone area. Seven of these occurred during the bathing season but no deterioration in water quality was recorded.

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)

Benone 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](mailto:MarineDivision.InfoRequests@doeni.gov.uk)

Phone: 028 9262 3244

Water Pollution 24hr Hotline

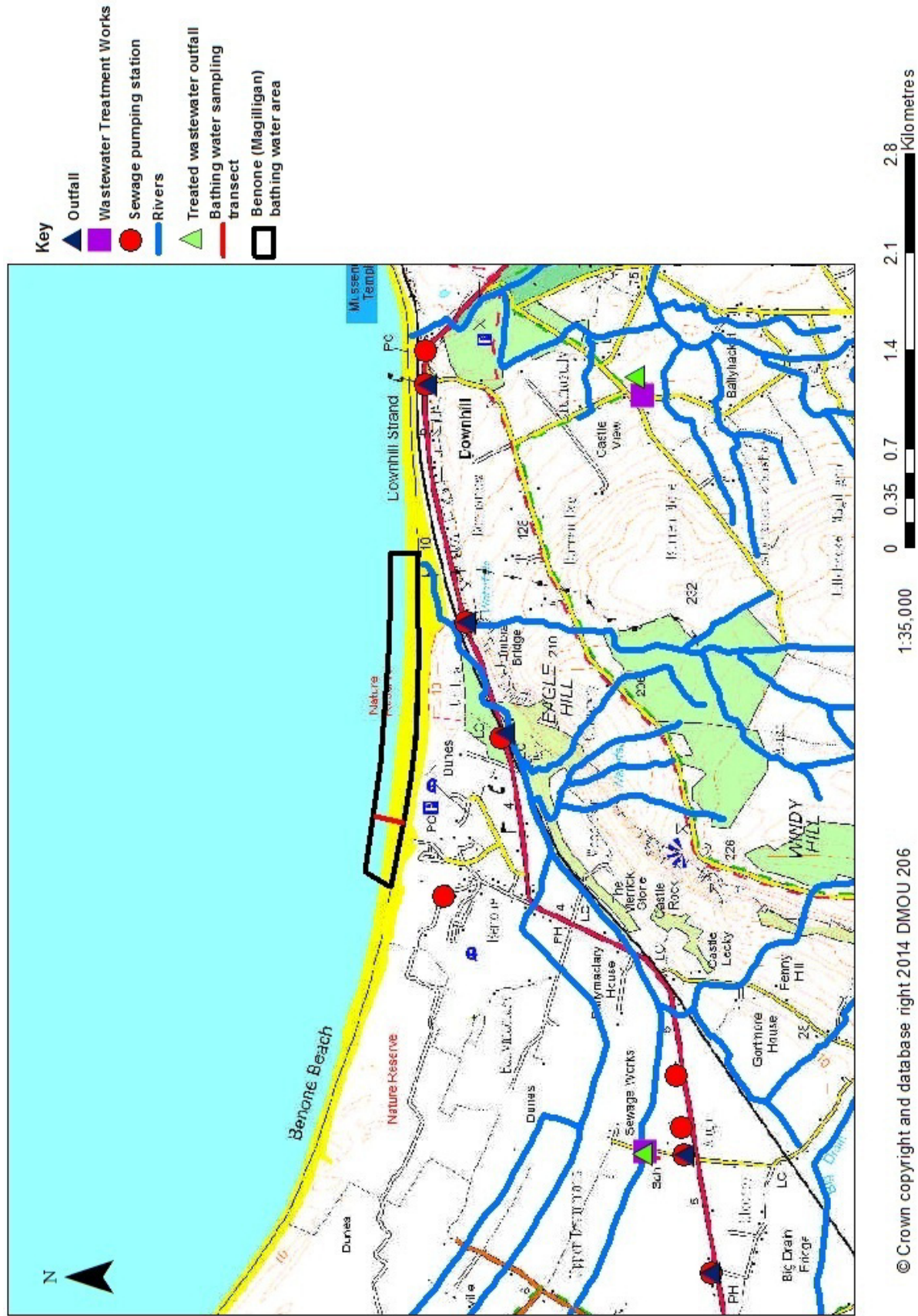
Phone: 0800 807060

Local Authority

Limavady Borough Council
7 Connell Street
Limavady, BT49 0HA

Phone: 028 777 22226

Map 1
Benone (Magilligan) Bathing Water -
Potential Pollution Sources



Map 2
Benone (Magilligan) Bathing Water -
EC Bathing Water Sample Location





DOE Marine Division
17 Antrim Road
Tonagh
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