

# Bathing Water Profile

## Castlerock

May 2018



Department of  
**Agriculture, Environment  
and Rural Affairs**

[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)



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## Map of Northern Ireland's Bathing Waters 2018



## Background to Bathing Water Profiles

This is one of a series of profiles which cover all 26 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 European requirement, under the 2006 Bathing Water Directive ([www.daera-ni.gov.uk/articles/bathing-water-quality](http://www.daera-ni.gov.uk/articles/bathing-water-quality)). 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 NI Direct web site ([www.nidirect.gov.uk/articles/bathing-water-quality](http://www.nidirect.gov.uk/articles/bathing-water-quality)). Waters are then classified annually as Excellent, Good, Sufficient or Poor, as defined by the European Bathing Water Directive, 2006.

## Key Information

<b>Bathing Water Name</b>	Castlerock Bathing Water
<b>EU bathing water ID number</b>	UKNO4_47900
<b>Location</b>	UK/Northern Ireland/County Londonderry/North Coast
<b>Year of identification</b>	1988
<b>Local council area</b>	Causeway Coast and Glens Borough Council
<b>Bathing Water Operator</b>	Causeway Coast and Glens Borough Council
<b>Description of bathing beach</b>	Sand, approximately 1 kilometre in length
<b>Monitoring Point</b>	Middle of bathing water, C77553638 (Map 2)

## A Description of Castlerock bathing water and the surrounding area

Castlerock is a popular seaside resort located on the north coast of Northern Ireland. Castlerock bathing water is approximately one kilometre in length and composed entirely of sand. The beach backs onto a sand dune system and golf course on the eastern side and a promenade area on the western side.

The immediate catchment for this beach is urban. However, the larger catchment consists of improved grassland with neutral grass and arable horticulture. The main geology in the area comprises mainly of Tertiary Basalts with the remainder being underlying Cretaceous and Jurassic rock.

One un-named river flows across the beach at the far western side of the bathing water.

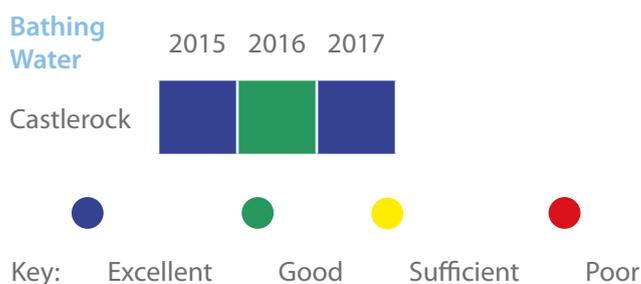
The River Bann flows out to sea at the eastern end of the bathing area through the Barmouth (see Map 1). The River Bann flows primarily through rural areas with agriculture being the main land use, draining some 40% of Northern Ireland. However it also flows through several towns including Coleraine, Portglenone and Toome.

The main area of population affecting the bathing area is the town of Castlerock, which is immediately adjacent to the bathing area. This town has a population of approximately 1,300, although during the summer season this number is greatly increased due to the influx of holiday makers. The town of Coleraine (pop. 24,000) is located to the south of the bathing area. The River Bann runs through the town of Coleraine and may indirectly affect the water quality at Castlerock.

## Bathing Water Quality History at Castlerock

Castlerock bathing water was identified in 1988. Monitoring and reporting is carried out by DAERA Marine and Fisheries Division.

### Castlerock Bathing Water Quality 2015-2017



In 2015 the 1976 Bathing Water Directive was replaced by the European Bathing Water Directive 2006/7/EC. This revised directive introduced more stringent bathing water standards. Bathing Waters are classified as Excellent, Good, Sufficient or Poor (see above). This classification is based on a statistical assessment of results from the last four years.

All of Northern Ireland's water quality objectives are set out in River Basin Management Plans ([www.daera-ni.gov.uk/topics/water/river-basin-management](http://www.daera-ni.gov.uk/topics/water/river-basin-management)). Within the Programme of Measures in the River Basin Management Plans there are a number of measures which relate directly to the protection of bathing waters.

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

It should be noted that weekly classification at Castlerock bathing water is generally Good or 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.

DAERA Marine and Fisheries Division work with NIEA and other Departments to identify and resolve sources of pollution.

## Are there Waste Water Treatment Works in the vicinity of Castlerock beach?

There is a major waste water treatment facility between Portrush and Portstewart with an outfall approximately 1 km off the coast to the east of Portstewart. This treated waste water outfall is approximately 6 km from the Castlerock bathing water. The works treats waste water from wider Portrush, Portstewart, Castlerock and Coleraine area. The waste water receives secondary treatment.

There is one minor waste water treatment works inland from Castlerock approximately 2.5 kilometres from the bathing area. (Map 1)

## Are there other risks of pollution from waste water systems?

Castlerock town is a popular seaside location attracting visitors during the summer season. This urbanisation is a potential source of pollution, especially during and after periods of prolonged or heavy rainfall. 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 system. If systems are not designed in that way, then sewers may overflow into residential areas. Within the Castlerock area there are wastewater pumping stations with associated emergency

overflows as shown on Map 1. NIW has in the past made significant improvements to the sewer system in this area.

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.daera-ni.gov.uk/publication/waste-water-treatment-works-discharges-and-ec-urban-waste-water-treatment-directive](http://www.daera-ni.gov.uk/publication/waste-water-treatment-works-discharges-and-ec-urban-waste-water-treatment-directive)) and the Water Framework Directive (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.netregs.org.uk/library\\_of\\_topics/pollution\\_prevention\\_guides.aspx](http://www.netregs.org.uk/library_of_topics/pollution_prevention_guides.aspx)).

## Are there risks from agriculture and rural activities?

Agriculture is a major industry in Northern Ireland and the wider catchment area of Castlerock bathing water has a significant amount of improved grassland containing neutral grass 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) 2014 (previously the Nitrates Action Programme Regulations (Northern Ireland) 2010) and the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2014 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 Castlerock 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.

Castlerock is located in the North Western River Basin Management Plan - further details can be found at [www.daera-ni.gov.uk/publications/north-western-river-basin-management-plan-2015-2021](http://www.daera-ni.gov.uk/publications/north-western-river-basin-management-plan-2015-2021).

## Is there evidence of short term water pollution events at Castlerock?

From 2014-2017 there were twenty-four confirmed incidents of water pollution in the Castlerock area. Sixteen of these incidents occurred during the bathing seasons.

## Abnormal Situations at Castlerock

The extreme summer flood event on 22 August 2017, which caused landslides and physical damage to property and wildlife, was considered to be an 'abnormal situation' in terms of the Bathing Water Directive. The situation occurred throughout the North West of Northern Ireland and impacted at four bathing waters along the North Coast, one of which was Castlerock. Appropriate signage was erected, advising against bathing. Scheduled samples were discarded and replacement samples analysed. Within the Bathing Water Directive, scheduled samples can be disregarded in such a situation, as long as the public has been warned of the poor 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)

Castlerock 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

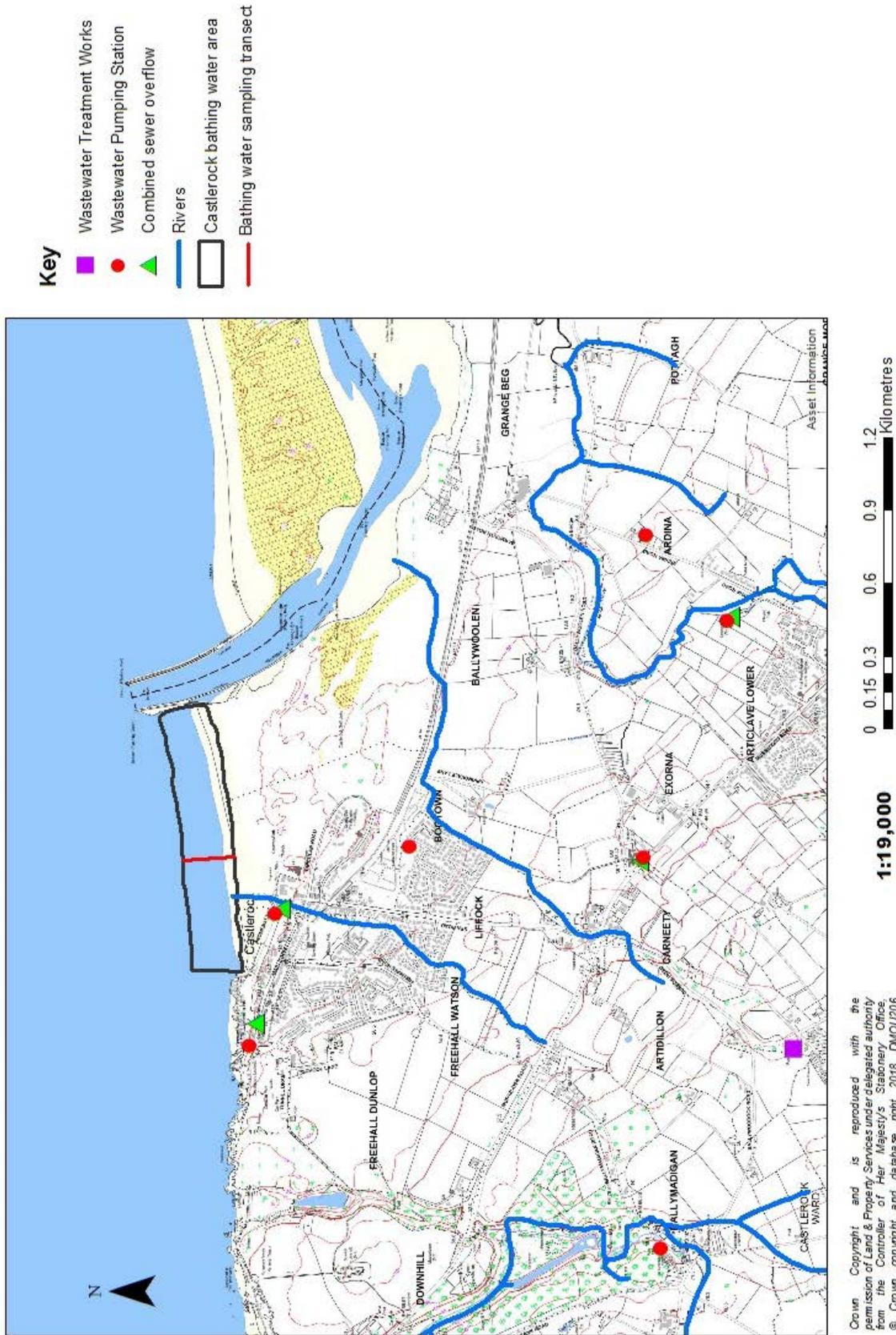
For general information about bathing waters:

**DAERA** Marine and Fisheries Division  
17 Antrim Road  
Tonagh  
Lisburn, BT28 3AL  
Email: [Marine.InfoRequests@daera-ni.gov.uk](mailto:Marine.InfoRequests@daera-ni.gov.uk)  
Phone: 028 9262 3244

**Water Pollution 24hr Hotline** Phone: 0800 807060

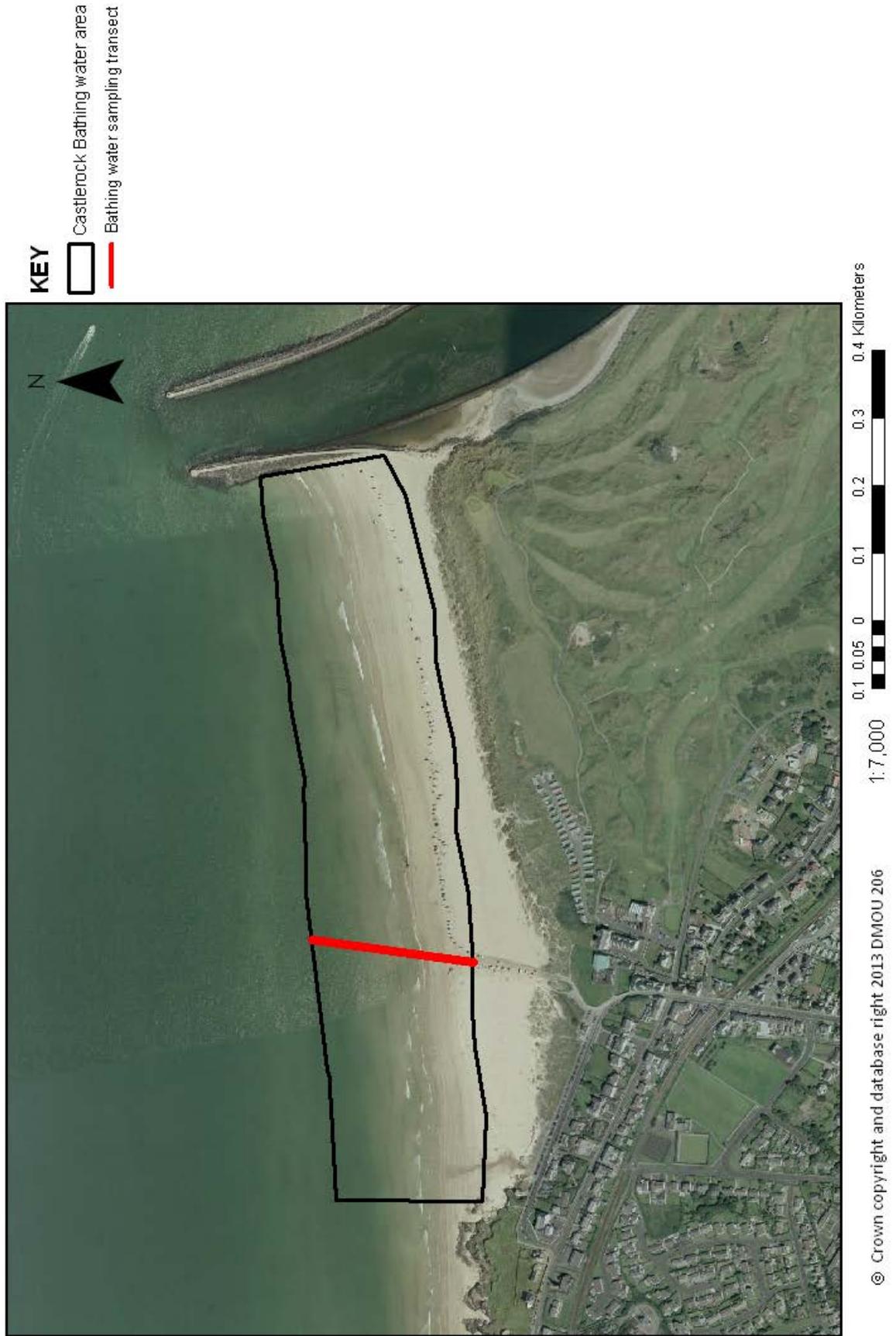
**Local Authority** Causeway Coast and Glens Borough Council.  
Cloonavin  
66 Portstewart Road  
Coleraine, BT52 1EY  
Phone: 028 7034 7034

Map 1  
Castlerock Bathing Water -  
Potential Pollution Sources



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Map 2  
Castlerock Bathing Water -  
EC Bathing Water Sample Location



Department of Agriculture, Environment and  
Rural Affairs  
Marine and Fisheries Division  
17 Antrim Road  
Tonagh  
Lisburn  
BT28 3AL

Water Pollution Hotline: 0800 807060  
Email: [Marine.InfoRequests@daera-ni.gov.uk](mailto:Marine.InfoRequests@daera-ni.gov.uk)

ISBN: 978-1-84807-863-5



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