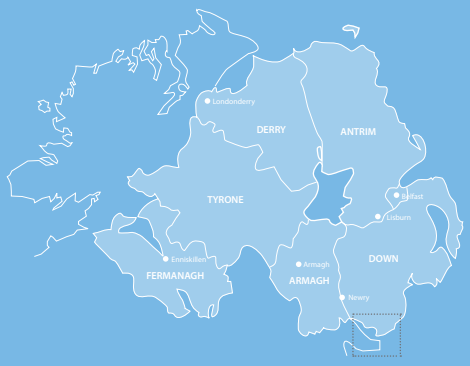
Department of the Environment
Marine Division

Bathing Water Profile

Cranfield Bay

May 2013



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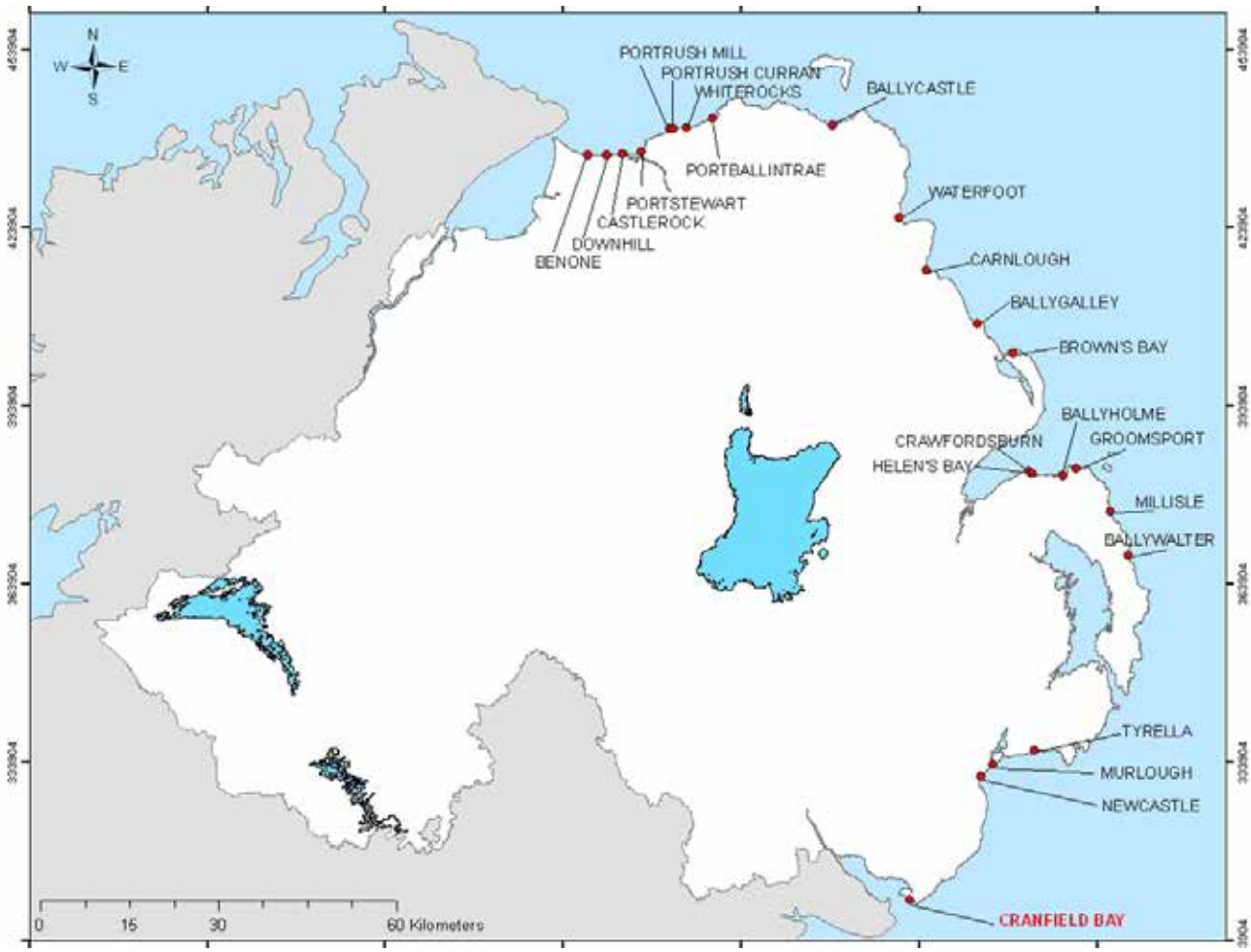
Map of Northern Ireland's Bathing Waters 2013



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	Cranfield (Cranfield Bay) Bathing Water
EU bathing water ID number	UKNO5_55600
Location	UK/Northern Ireland/County Down/South Down Coast
Year of identification	1993
Local council area	Newry and Mourne District Council
Bathing Water Operator	Newry and Mourne District Council
Description of bathing beach	Sand and pebbles, approximately 1.5 kilometres in length
Monitoring Point	Middle of bathing water, J26371066 (Map 2)

A Description of Cranfield Bay bathing water and the surrounding area

Cranfield Bay bathing water is a popular holiday destination located on the South Down coast at the mouth of Carlingford Lough. The beach is comprised mainly of sand and pebbles and is approximately 1.5 km in length. The bathing water is surrounded by a number of caravan parks. In the central area, a sea wall protects a car park, picnic area, children's play area and public toilets. The bathing area is popular for water based activities and the beach is zoned to accommodate bathers and boat users.

The immediate catchment for this bathing area is rural, and the majority of the land use is improved grassland, neutral grass, acid grass and dense dwarf shrub heathland. The main geology in the area is composed of lower Palaeozoic geology (Hawick Group), carboniferous geology of the Carlingford group (limestones) and tertiary geology of various intrusives.

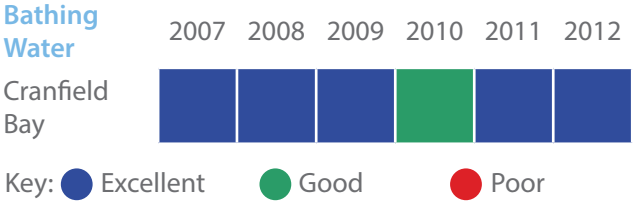
The bathing water is located at the foot of the Mourne Mountains, within the Mournes Area of Outstanding Natural Beauty (AONB) and the Mournes and Slieve Croob Environmentally Sensitive Area (ESA). Carlingford Lough Area of Special Scientific Interest (ASSI) adjoins the western end of the bathing water. Also the area immediately to the west of the bathing water is designated a Special Protection Area and a Ramsar site.

The small fishing town of Kilkeel has an approximate population of 7,000 and is 5 km to the north east of the bathing water.

Bathing Water Quality History at Cranfield Bay

Cranfield 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

Cranfield Bay Bathing Water Quality 2007-2012



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 Cranfield Bay 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 Cranfield Bay beach?

Inland from the caravan parks and amenity area is a small waste water treatment works which serves the wider Cranfield area. Treated effluent is discharged to sea some 300m offshore, outside the bathing water area (Map 1).

Are there other risks of pollution from waste water systems?

Cranfield Bay is a popular seaside location during the summer season attracting large numbers of visitors to the surrounding caravan and holiday parks. The urbanisation associated with these parks 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 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 Cranfield Bay area there are 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 majority of land cover within the catchment area of Cranfield Bay bathing water is improved grassland, neutral grass, acid grass and dense dwarf shrub heathland. 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.

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

Cranfield Bay is located in the Neagh Bann River Basin Management Plan within the Carlingford and Newry local management plan - further details can be found at www.doeni.gov.uk/niea/carlingford-and-newry_lma_actionplan.pdf

Is there evidence of short term water pollution events at Cranfield Bay?

From 2009 - 2012 there were three confirmed incidents of pollution within 3kms of the bathing water. All of these incidents occurred during the bathing season and two were 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)

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

Daily water quality forecasts

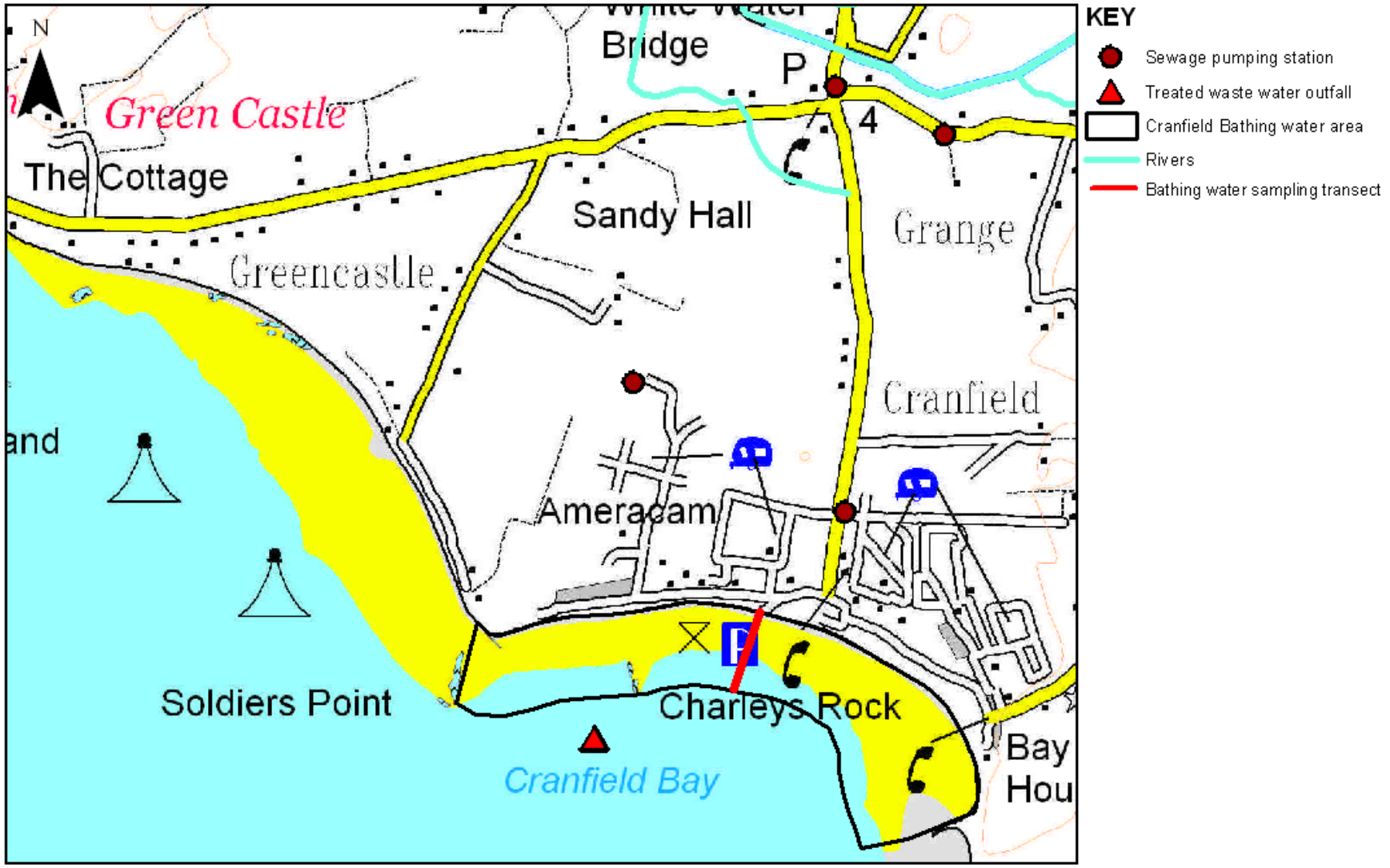
There is presently no facility to predict bathing water quality on a daily basis. However, the general advice remains: do not bathe during or for up to 2 days after heavy rainfall events.

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	Newry and Mourne District Council Monaghan Row Newry, BT35 8DJ Phone: 028 3031 3031

Map 1
Cranfield Bay Bathing Water - Potential Pollution Sources



1:12,000 0.25 0.125 0 0.25 0.5 0.75 1 Kilometers

Map 2
Cranfield Bay Bathing Water -
EC Bathing Water Sample Location

1:6,000

0.1 0.05 0 0.1 0.2 0.3 0.4 Kilometers

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