

Bathing Water Profile

Newcastle

May 2023



Sustainability at the heart of a living, working, active landscape valued by everyone.



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

www.daera-ni.gov.uk



Map of Northern Ireland's Bathing Waters 2023



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 requirement, under the Quality of Bathing Water Regulations (Northern Ireland) 2008 (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 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 website (www.nidirect.gov.uk/articles/bathing-water-quality). Waters are then classified annually as Excellent, Good, Sufficient or Poor, as defined by the Quality of Bathing Water Regulations (Northern Ireland) 2008.

Key Information

Bathing Water Name	Newcastle Bathing Water
Location	UK/Northern Ireland/County Down/South Down Coast
Year of identification	1988
Local council area	Newry, Mourne and Down District Council
Bathing Water Operator	Newry, Mourne and Down District Council
Description of bathing beach	Sand, pebbles and stones, approximately 2.5 kilometres in length, contiguous with Murlough Bathing Water
Monitoring Point	Middle of bathing water, J38023150 (Map 2)

A Description of Newcastle bathing water and the surrounding area

Newcastle is a popular tourist destination located on the South Down coast of Northern Ireland. The beach is comprised of sand, pebbles and larger stones, is approximately 2.5 kilometres in length and is contiguous with Murlough bathing water, giving a total length of approximately 5.5 kilometres. The major part of the bathing water is backed by a promenade and then the seaside town of Newcastle. The exception is the northern section of the bathing water which is backed by sand dunes and a golf course. The beach has a very gentle slope. The inter-tidal distance can be 0.4 km, or more at low tide. The entire area is within the Mournes and Slieve Croob Area of Outstanding Natural Beauty and the Murlough Special Area for Conservation.

The immediate catchment for this bathing area is urban. However further inland the catchment consists of acid grass, improved grassland and dense dwarf shrub heath to the north. The Mourne Mountains lie to the south. The underlying geology of the area is very mixed with the granite mountains to the south and Ordovician geology (Gala Sandstone, Hawick Group) in the Newcastle valley to the north.

There are two rivers which flow across the bathing beach. The Shimna River flows out to sea near the middle of the bathing water having flowed through a rural environment and the town of Newcastle. Before entering the bathing water the Shimna River converges with several other rivers which have also flowed through a rural environment and the town of Newcastle. The Shimna may therefore be influenced

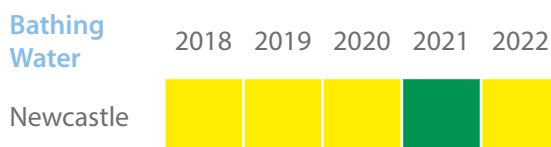
by rural and urban discharges. The Glen River flows out to sea at the south eastern end of the bathing water having originated in the Mourne Mountains.

The town of Newcastle surrounds the beach and has a winter population of approximately 8,500 which increases during the summer months to around 12,000 due to an influx of holiday makers.

Bathing Water Quality at Newcastle

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

Newcastle Bathing Water Quality 2018-2022



Key: ● Excellent ● Good ● Sufficient ● Poor

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 the River Basin Management Plan (www.daera-ni.gov.uk/topics/water/river-basin-management). Within the Programme of Measures in the River Basin Management Plan 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 Newcastle bathing water is generally 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.

Newcastle bathing water was identified as being at risk from likely water pollution based on summary analysis of bathing water results, monitoring of associated rivers and some investigative monitoring. The Department intends to continue this investigative work.

Waste Water

The Newcastle area is served by a combined sewerage system which delivers waste waters to a Waste Water Treatment Works adjacent to the harbour. Waste water receives secondary treatment with bacterial reduction during the bathing season. The treated effluent is discharged some 300m from the shoreline, approximately 1 km south of the bathing water.

The bathing water was designated as sensitive under Annex IIaC of the Urban Waste Water Treatment Directive in July 2006. As a result of this designation Northern Ireland Water (NIW) upgraded the Waste Water Treatment Works to provide storm storage and bacterial reduction of the effluent during the bathing season. The network has also been upgraded to afford protection to the bathing water.

Newcastle town is a popular seaside location attracting large numbers of 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 pump system. If systems are not designed in that way, then sewers may overflow into residential areas. Within the Newcastle area there are combined sewer overflows (CSO), emergency overflows and wastewater pumping stations 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 Waste Water Treatment Regulations (Northern Ireland) 2007 (www.daera-ni.gov.uk/articles/urban-waste-water) and the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017.

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 (<https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/>).

Agriculture and rural activities

Agriculture accounts for approximately 70% of the total Northern Ireland land area of 1.4 million hectares, and characterises much of the rural landscape. The agricultural industry is predominately grass based, with grazing livestock accounting for more than two-thirds of the gross industry output. Agriculture and the agri-food sector makes a very important contribution to the economy of Northern Ireland.

The most significant pressures on water quality are from the release of the nutrients phosphorous and nitrogen from agricultural sources. Agriculture can also give rise to sediment entering waters due to the damage caused to river banks and lake shores by livestock trampling and from other types of land disturbance e.g. ploughing and overgrazing. Agricultural activities are also a source of certain microbial vectors causing human illnesses including cryptosporidium and e-coli bacteria which can be an issue in bathing water areas. Other pressures from agriculture include the contamination of waters from hazardous chemicals, such as pesticides and sheep dip.

The Nitrates Action Programme and the Phosphorous Regulations have been revised and combined into the **Nutrients Action Programme (NAP) 2019-2022**. The Nutrient Action Programme (Amendment) Regulations (Northern Ireland) 2019 came into operation on 15 October 2019. The revised NAP has new measures to promote more efficient nutrient management and best practice.

The **Knowledge Advisory Service (KAS)** was set up in April 2018 as a single advisory service aimed at supporting Northern Ireland's farm and food businesses.

The **Environmental Farming Scheme (EFS)** is DAERA's agri-environment scheme under the Rural Development Programme 2014-2022. EFS has been designed to address specific environmental needs, primarily relating to biodiversity and water.

A **Soil Nutrient Health Scheme (SNHS)** for Northern Ireland was launched in 2022 and will run for 4 years. The Scheme is a soil sampling and carbon analysis scheme that will provide farmers with nutrient levels in their soils across all fields as well as providing an accurate estimate of the carbon stored in the soils,

hedgerows and trees on their farms. The scheme will benefit farmers in management of their nutrient applications which will help improve water quality and manage agricultural land more effectively.

The majority of land cover within the catchment area of Newcastle bathing water is acid grass, improved grassland and dense dwarf shrub heath.

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

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 the River Basin Management Plan, which takes an integrated approach to the protection, improvement and sustainable use of the water environment. This plan identifies existing pollution reduction programmes and additional measures which could be implemented to maintain or improve the water quality.

Newcastle is located in the North Eastern River Basin District. A draft of the 2021-2027 river basin management plan can be found here: www.daera-ni.gov.uk/sites/default/files/consultations/daera/Draft%203rd%20cycle%20River%20Basin%20Management%20Plan%20for%20Northern%20Ireland%202021-2027_0.PDF

Pollution event

From 2019-2022 there were eight confirmed incidents of water pollution within 3kms of the bathing water.

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)

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

Daily water quality forecasts

Newcastle is one of six bathing waters in Northern Ireland with daily bathing water quality prediction modelling. The model has been developed under the [SWIM NI](#) programme with predictions available to the public during the bathing season. The project was originally funded by the EU's INTERREG VA programme, managed by the Special EU Programmes Body (SEUPB), and match-funded by the Department of Agriculture, Environment and Rural Affairs in Northern Ireland (DAERA), and the Department of Housing, Planning and Local Government in Ireland. This model is currently in the pilot stage and daily water quality predictions are based on forecasted weather. Results are updated daily at 09:00. The predictions can be found on electronic signage or QR codes displayed at the bathing water and on the [SWIM NI](#) webpage or App. This system provides members of the public with a warning when there may be poor water quality brought about by short-term pollution events, enabling them to make an informed choice about bathing. As weather forecasts are not always accurate DAERA advice remains not to bathe during or up to 2 days after prolonged or heavy rain.

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

Phone: 028 9262 3244

Water Pollution 24hr Hotline

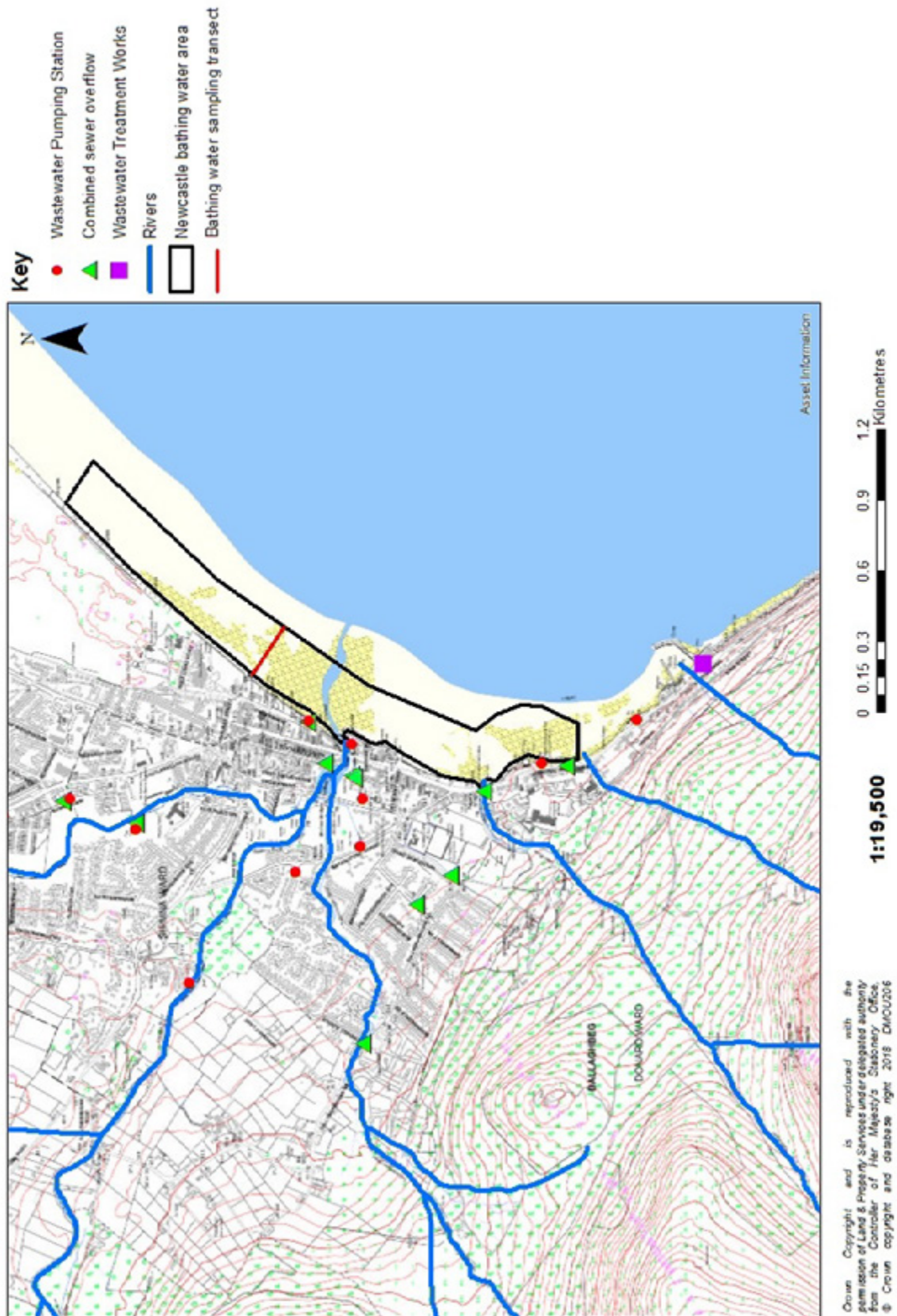
Phone: 0800 807060

Local Authority

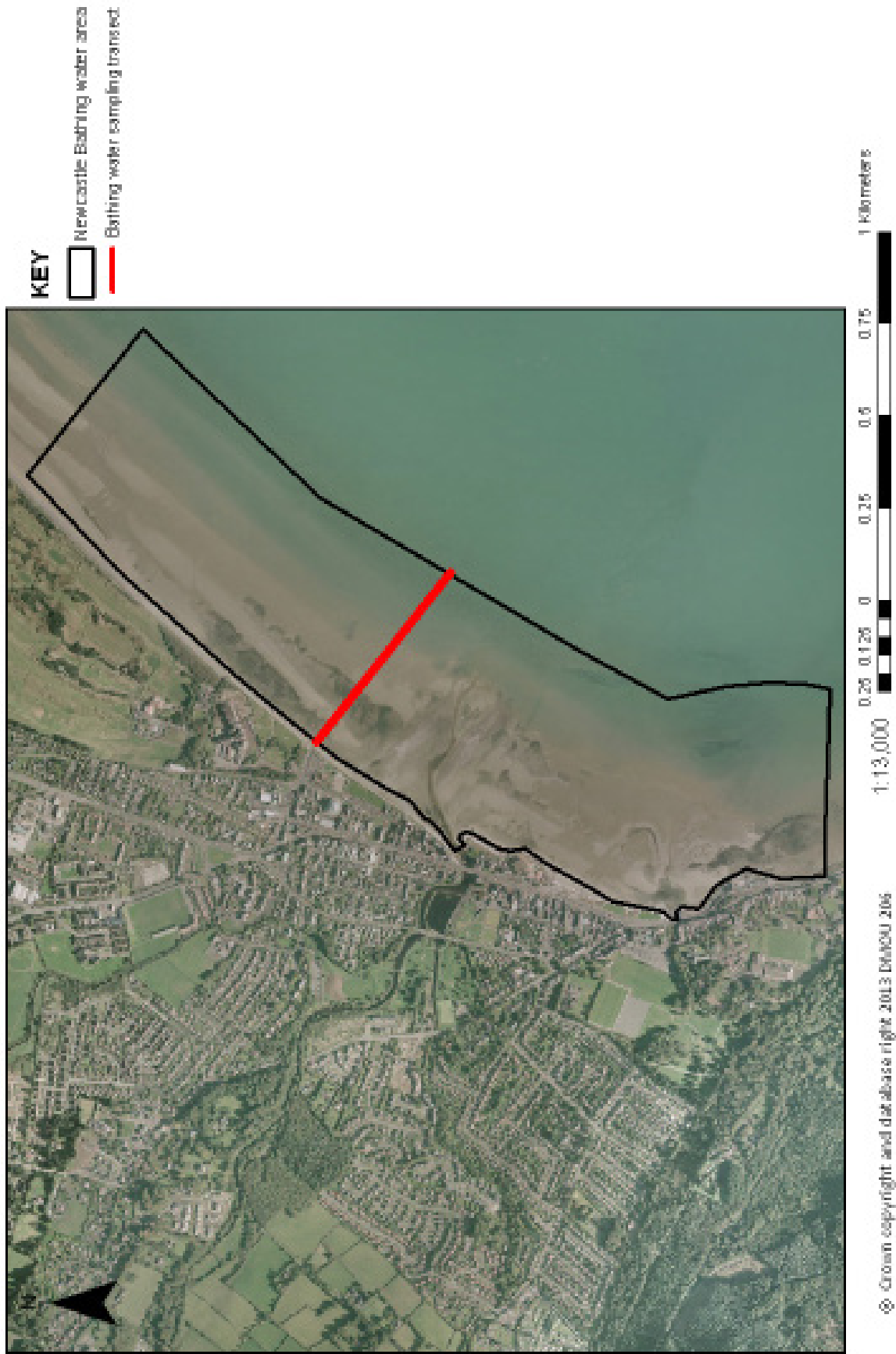
Newry, Mourne and Down
District Council
Downpatrick Office
Downshire Civic Centre
Downshire Estate
Ardglass Road
Downpatrick
Co. Down
BT30 6GQ

Phone: 0300 013 2233

Map 1
Newcastle Bathing Water -
Potential Pollution Sources



Map 2
Newcastle 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

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