

# Bathing Water Profile

## Newcastle

May 2016



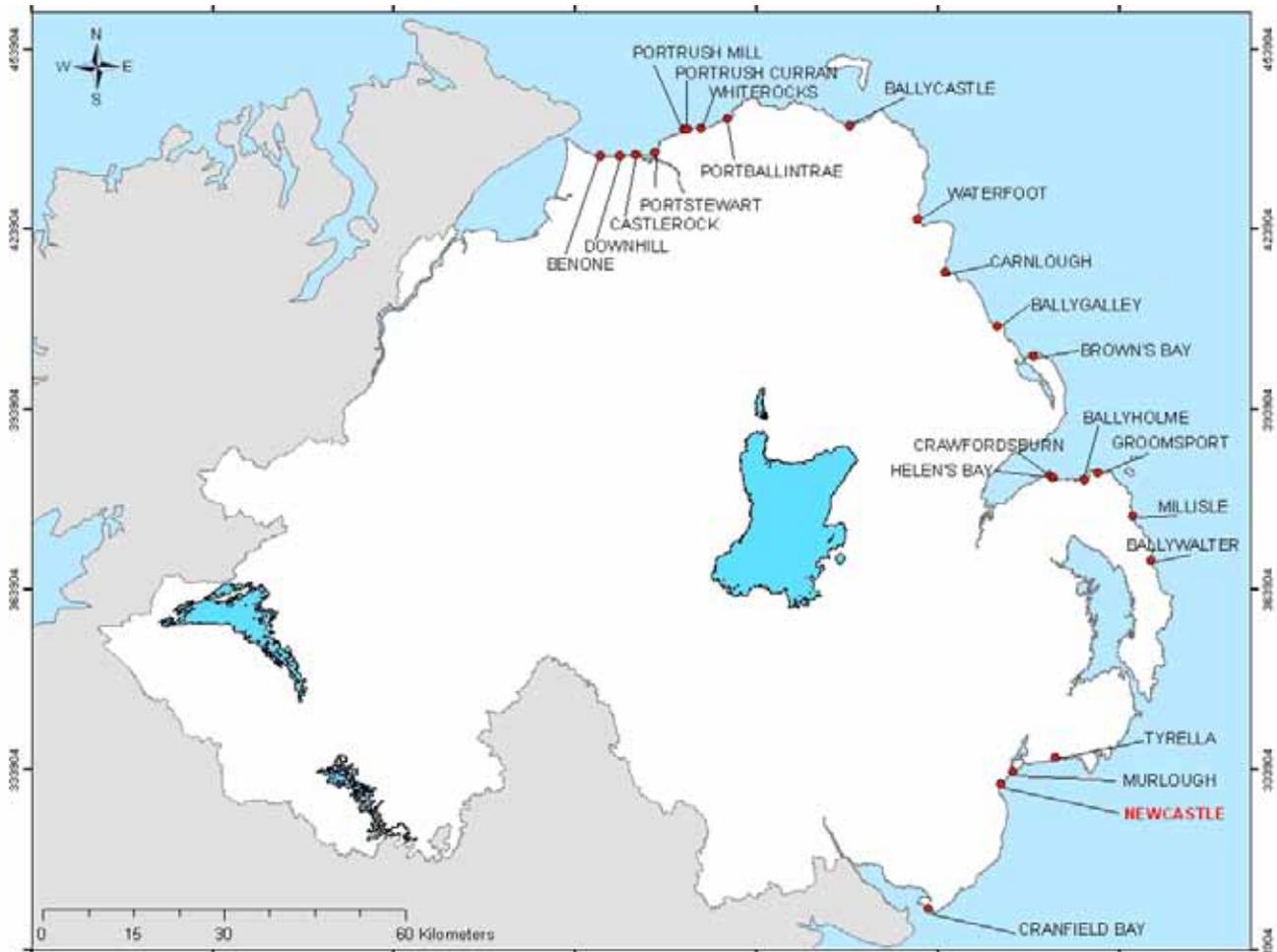
Department of  
**Agriculture, Environment  
and Rural Affairs**

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



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## Map of Northern Ireland's Bathing Waters 2016



## 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 European requirement, under the 2006 Bathing Waters 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 website ([www.nidirect.gov.uk](http://www.nidirect.gov.uk)). 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>	Newcastle Bathing Water
<b>EU bathing water ID number</b>	UKNO3_54300
<b>Location</b>	UK/Northern Ireland/County Down/South Down Coast
<b>Year of identification</b>	1993
<b>Local council area</b>	Newry, Mourne and Down District Council
<b>Bathing Water Operator</b>	Newry, Mourne and Down District Council
<b>Description of bathing beach</b>	Sand, pebbles and stones, approximately 2.5 kilometres in length, contiguous with Murlough Bathing Water
<b>Monitoring Point</b>	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 intertidal 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 History at Newcastle

Newcastle bathing water was identified in 1993. Monitoring and reporting is carried out by DAERA Marine and Fisheries Division.

### Newcastle Bathing Water Quality 2015



Key: ● Excellent ● Good ● Sufficient ● Poor

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 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.

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

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

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 (Map 1).

The bathing water was designated as sensitive under Annex IIa of the Urban Waste Water Treatment Directive in July 2006. As a result of this designation Northern Ireland Water (NIW) has upgraded the Waste Water Treatment Works to provide storm storage and bacterial reduction of the effluent during the bathing season. This work was completed in July 2013. The network is also being upgraded to afford protection to the bathing water.

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

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

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

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

From 2012-2015 there were eleven confirmed incidents of water pollution within 3kms of the bathing water. Seven of these incidents occurred during the bathing seasons.

### 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

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)

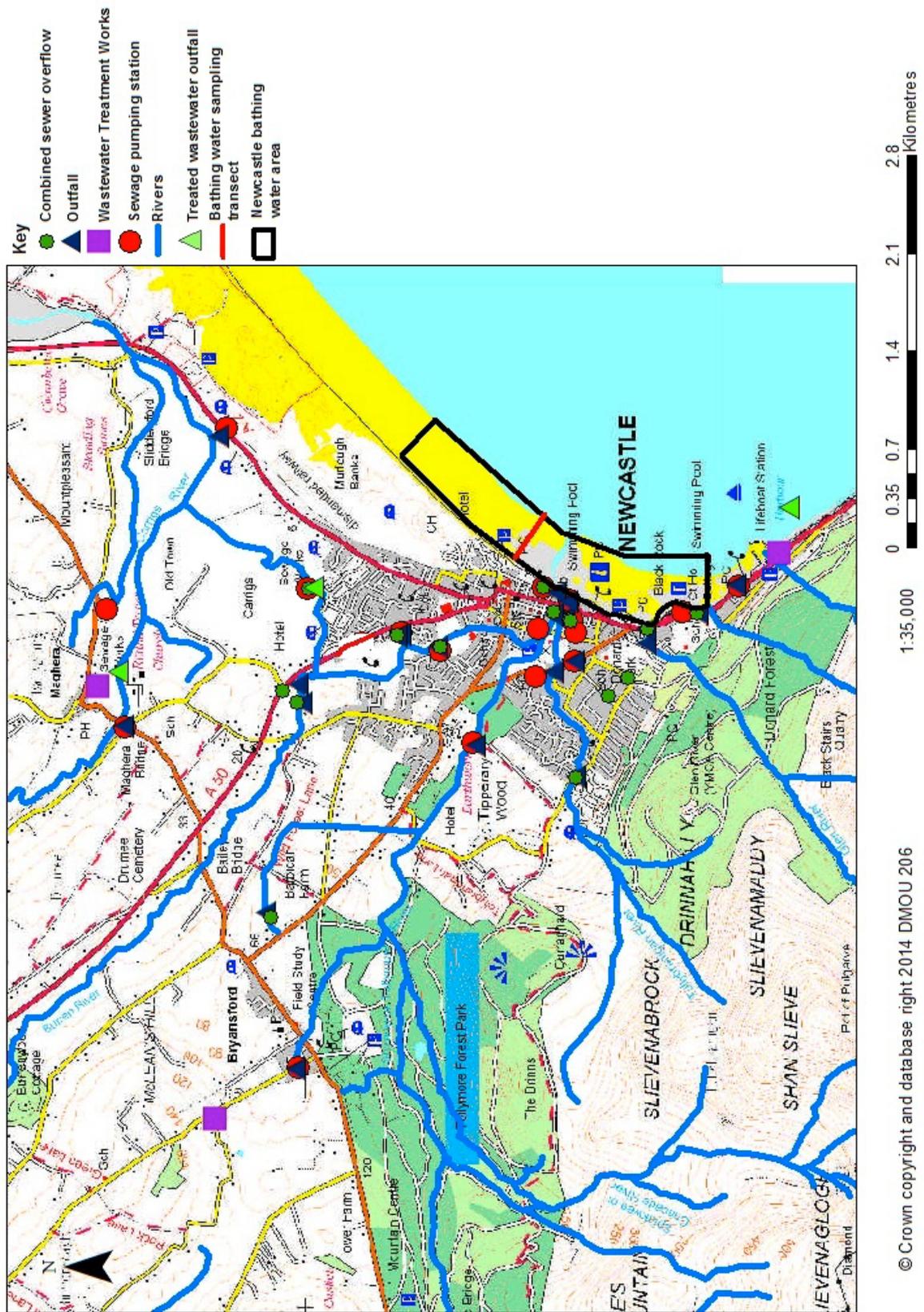
Phone: 028 9262 3244

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

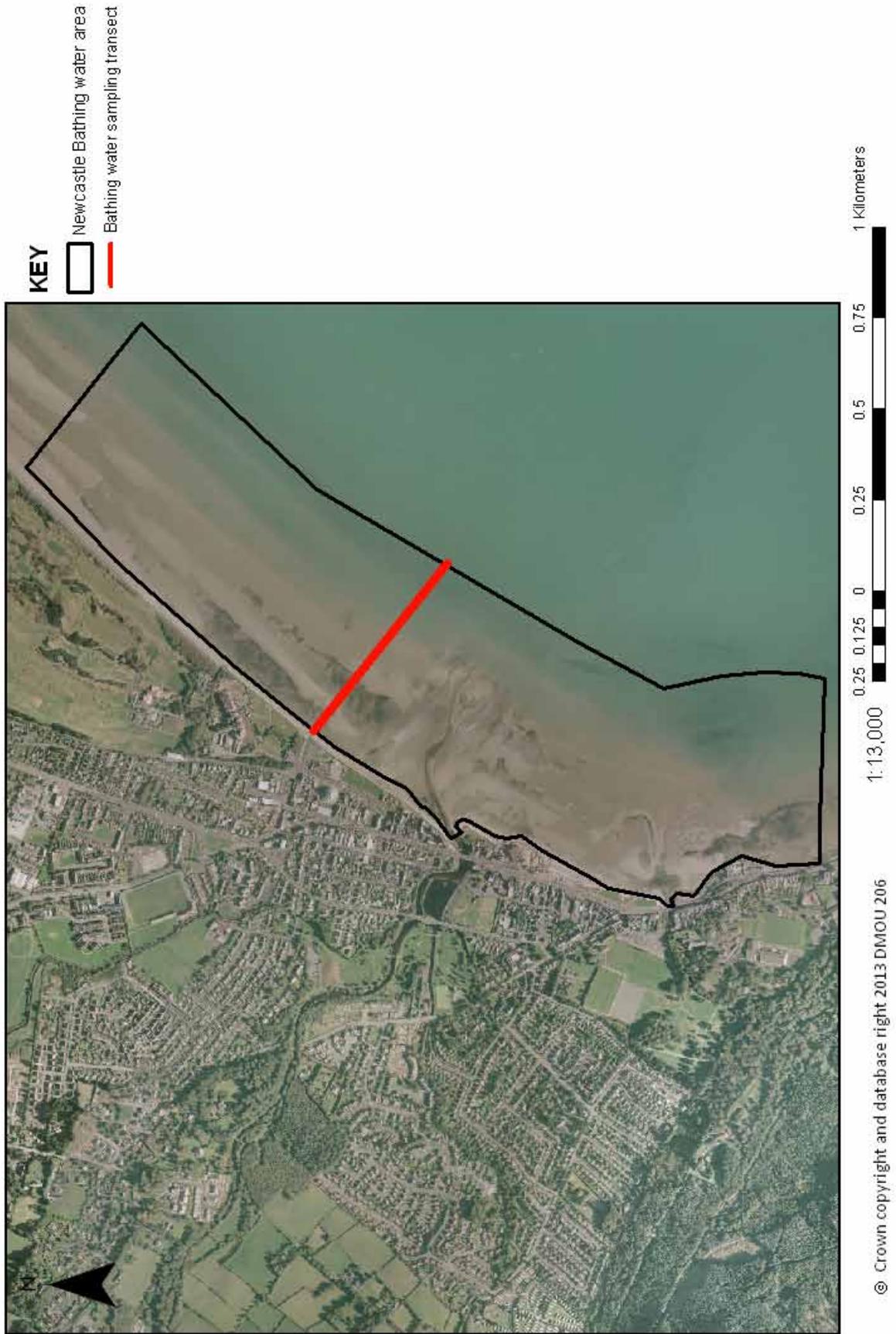
**Local Authority** Newry, Mourne and Down District Council  
Downpatrick Office  
Downshire Civic Centre  
Downshire Estate  
Ardglass Road  
Downpatrick  
Co. Down  
BT30 6GQ

Phone: 0300 013 2233

Map 1  
Newcastle Bathing Water -  
Potential Pollution Sources



Map 2  
Newcastle Bathing Water -  
EC Bathing Water Sample Location



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ISBN: 978-1-84807-648-8



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