

Ards North Wastewater Improvement Project

An £18m NI Water investment to upgrade a large part of the local wastewater infrastructure and improve water quality along the Ards Peninsula.

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Project overview

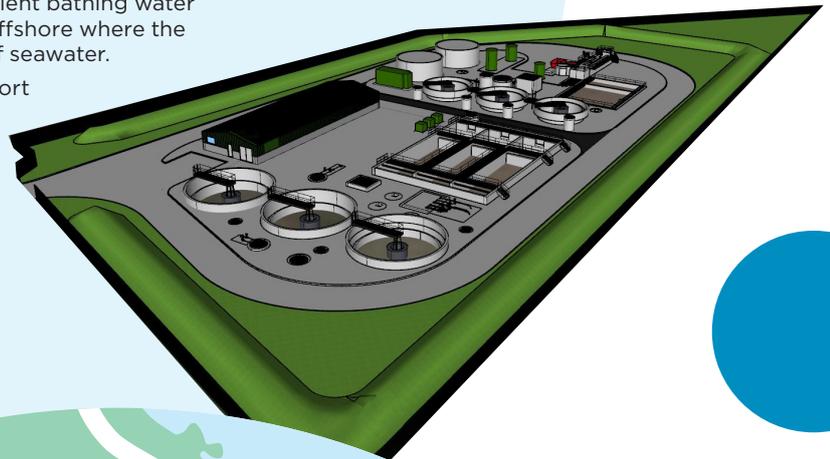
The Ards North Wastewater Improvement Project represents an £18m investment by NI Water to upgrade the existing wastewater collection and treatment systems serving a large part of the Ards Peninsula to bring about social, economic and environmental benefits.

The extensive project involves the rationalisation of the Carrowdore, Ballywhiskin and Ballywalter catchments so that all wastewater flows from these areas are transferred to a new state-of-the-art wastewater treatment works (WwTW) being constructed off the Ganaway Road in Ballywalter.

In addition to these catchments, the new treatment works has been designed to treat wastewater flows from nearby caravan parks and small settlements, which currently have no treatment facilities.

The effluent from the WwTW will be treated to strict environmental standards and will flow to a new long sea outfall. To achieve excellent bathing water quality at local beaches, the outfall discharges 550m offshore where the treated effluent is dispersed and diluted in 4m depth of seawater.

The new wastewater treatment infrastructure will support long-term economic growth in local development and tourism. Additionally, the investment will deliver environmental improvements, including cleaner beaches and bathing waters, which will benefit all those living, working or visiting this scenic part of the Ards Peninsula.



What's involved in the project?

At the centre of the 24-month project is the construction of a state-of-the-art wastewater treatment facility on a greenfield site off the Ganaway Road in Ballywalter.

This modern new treatment works has been designed to treat all wastewater flows from Carrowdore, Ballywhiskin, Ballywalter, nearby caravan parks and other small settlements, before discharging the final effluent to the Irish Sea via a new outfall pipe which will stretch 550m out to sea at Ballyferris.

As part of the extensive rationalisation the following strategic improvements will be made:



Carrowdore

The existing wastewater treatment works at Carrowdore will be converted to a pumping station which will pump all wastewater flows to the new Ards North WwTW at Ganaway Road. Any useful existing assets at the site will be reused where possible at other NI Water sites.



Ballywhiskin

The current primary settlement (septic) tank at Ballywhiskin will be modified into a new wastewater pumping station. This will allow all wastewater flows from the Ballywhiskin area to be pumped to the new Ards North WwTW for effective treatment. This adaptation will put an end to discharges of untreated wastewater from this septic tank.



Ballywalter

The existing wastewater pumping station at Fowler Way in Ballywalter will be upgraded with new underground storage, new pumps and new mechanical and electrical equipment. As part of the rationalisation, wastewater will be pumped from this location to the new Ards North WwTW at Ganaway Road. The existing Ballywalter WwTW, located near Meadow Park, will be decommissioned and the site reinstated.

Pipelines

New pumping mains and gravity sewers will be required to link all of the new and upgraded pumping stations to the new wastewater treatment works at Ganaway Road and to transfer the treated wastewater to the new outfall pipe. All pipelaying works will be carried out in agreement with the Department for Infrastructure and will be notified in advance to any affected residents and businesses through letter drops, signage and press/social media posts.

The majority of pipelaying can be carried out under lane closures with traffic lights. However, where pipelaying is in narrow roads, a road closure will be necessary to accommodate the installation in the safest possible manner. Residents will be notified of road closures and the associated diversion route in advance and access to properties will be maintained at all times.

Outfall

The new outfall will stretch 550m from Ballyferris out into the Irish Sea. It will be installed 3m below the seabed using a 'float and drop' method of construction. The outfall pipeline will be fabricated onshore (most likely at Ballyhalbert Harbour) and floated to Ballyferris where it will be sunk into position in a pre-dredged trench.

Exclusion zones will be formed on sections of the beach during the different work activities associated with the outfall installation. These will be clearly demarcated via signage on the beach and in the marine environment using marker buoys.

Model simulations for the Ards North project were carried out to demonstrate that the tidal flow in the location of Ballyferris is sufficient to adequately disperse treated effluent. It has been demonstrated by the model that water quality within the designated bathing area would achieve the "Excellent" standard of the latest EC Bathing Waters Directive.

During the design period, various surveys of the seabed and inter-tidal flora and fauna were undertaken to ensure that the outfall route would not impact on any significant or rare seabed or inter-tidal plant and animal communities.

The design of each of the construction elements has been developed taking into account extensive engineering, environmental and economic criteria so that the best solutions have been obtained.

Why is the scheme needed?

Currently the wastewater treatment works serving the villages of Carrowdore and Ballywalter are operating at full capacity and this scheme is essential to ensure that these areas meet future EU and Northern Ireland Environment Agency (NIEA) standards.

The area of Ballywhiskin currently has only primary settlement which is not deemed 'appropriate' treatment.

The caravan parks and small settlements in the Ballywalter area are served by private septic tanks, which again only offer primary settlement of wastewater, before discharge to nearby watercourses.

The beaches in the area represent a significant tourist amenity and this NI Water investment is essential to meet future bathing water quality standards in the area, in line with NIEA standards.

In close liaison with a range of stakeholders, NI Water and its technical support team from TetraTech, have developed this robust scheme to serve these combined catchments and cope with seasonal fluctuations in population to protect the tourism potential of the area for many years to come.



Project aims

- Achieve compliance with current and future EU directives on effluent discharge standards.
- Meet Registered Discharge Standards set by the Northern Ireland Environment Agency (NIEA).
- Provide a flexible design to cater for future flows and the significant summer/winter fluctuations.
- Minimise impacts to community and environment.
- Support local development, tourism and economic growth.
- Deliver best value for money construction making use of existing assets.

Programme

The Ards North Wastewater Improvement Project will run from May 2021 until April 2023.

The first element of work programmed to commence is the construction of the new wastewater treatment works off Ganaway Road. Site clearance and preparation works have been ongoing throughout May and June 2021 with main construction works due to get underway thereafter. The new WwTW will be commissioned in early 2023 once all the interconnecting pumping stations and pipelines have been installed and tested.

Work to build/upgrade the various pumping stations and lay the new pipelines will be ongoing from the end of July 2021. Residents, businesses and the general public will be notified in advance of any works in their area and every effort will be made to minimise disruption and complete the work as quickly as possible.

Work on the outfall will also get underway towards the end of July 2021 and should be completed by the end of the year.



Project team

NI Water's contractor for the construction of the new WwTW, wastewater pumping stations and the installation of pipelines is BSG Civil Engineering.

Farrans Construction, alongside specialist marine contractor ABCO, will install the new outfall pipe.

Project management/technical support services are being provided by TetraTech.



Keeping stakeholders informed

NI Water and our project team appreciate the support of local residents, landowners, businesses and holidaymakers as we move forward with this vital wastewater improvement project. We will make every effort to keep stakeholders informed of progress and will provide advance notification of any work affecting your area.

Contact

If you have any queries relating to this essential wastewater improvement project, please contact Waterline on **03457 440088** quoting “**Ard’s North Wastewater Improvement Project**” or email waterline@niwater.com

www.niwater.com

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PLAY SAFE, STAY SAFE

We would take this opportunity to remind members of the public, that construction sites are dangerous areas for unauthorised persons, especially children and we would appreciate your cooperation in ensuring that children do not play in or around any construction works or machinery. Working areas will have warning signs in place to protect the public from any hazards. The public are advised to stay out of these areas for their own safety.



If it's not
**PEE, POO
or PAPER**
it will block
the pipes

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