

Investing to improve water quality

To create a more resilient region, we've committed to improving the health of rivers, lakes and waterways, helping to make the North West stronger, greener and healthier.

That commitment includes major investment in our wastewater network and treatment infrastructure to reduce the frequency of storm overflow operations.



Image credit: Westmorland and Furness Council

Action Plan for Barrow

As part of our long-term Action Plan for Barrow, we're working on a multi-million pound investment programme.

Over the next five years, this would see improvements to 21 storm overflows in 9 locations across the Barrow catchment, reducing spills and enhancing water quality in the Walney Channel, Irish Sea and Morecambe Bay.

Barrow has a rich industrial heritage and is an area of environmental importance. There are also three designated bathing waters surrounding Walney Island: West Shore, Sandy Gap and Biggar Bank.

Our work will reduce the number of spills to no more than 10 spills per year, over a 10-year period, with some sites achieving 3 Spills per Bathing Season (SPBS).



Building on decades of water quality improvements

Barrow Wastewater Treatment Works (WwTW) was constructed in 1996. When you flush the loo, this is where your wastewater ends up. It's then treated and returned to the environment. Before this, all sewage from Barrow was discharged largely untreated directly to the Walney Channel and Roosecote Sands area.

Over the past 30 years we've continued to develop and enhance the pipes and wastewater treatment facilities with some of the major investments described below:

- **1995-2000:** The Walney Island and West Barrow project was completed to remove 6 large septic tanks and connections into a new larger sewerage system. This sewerage system connects much of Barrow to the new WwTW in order to improve water quality in Walney Channel.
- **2000-2005:** Projects focussing on improving water quality were completed around Ormsgill Reservoir, Mill Beck and Poaka Beck (Dalton). This included the construction of new wastewater pumping stations and installation of new screens to ensure that spills to the environment were reduced and screened to industry standards.
- **2010 – 2015:** Improvements focussed on the wastewater treatment works, with 33,000m³ additional storage and a new, longer sea outfall. The WwTW can only process a certain amount of wastewater. High flows, or storm events, can create too much wastewater for the treatment works to process so this additional storage holds extra flows until the treatment works is able to process it. This improves water quality by reducing the amount of untreated wastewater discharging to the sea.

Did you know we've added ultraviolet (UV) treatment to Barrow? This neutralises the bacteria and protects water quality.



What are the challenges facing water quality in Barrow?

Barrow has a largely combined sewer network. A combined sewer collects wastewater from our homes (e.g. toilets, showers and washing machines etc.) and rainwater that falls on our roofs and roads. This means that in periods of heavy or prolonged rainfall combined sewers can overflow.

Combined storm overflows have been a feature of the sewer system for more than 150 years and act as emergency release valves to let diluted sewage out to rivers and the sea. This helps prevent flooding in streets and homes.

Did you know?
Over half of our sewer network in the North West is combined and we have 40% more overflows than the industry average?

In addition to our specific challenges with storm overflows, there are also a number of wider issues impacting water quality in Cumbria:



Infrastructure

The wastewater network is made up of 565 treatment works and 47,224 miles of wastewater pipes. 54% of this system is combined with 200 storm overflows.



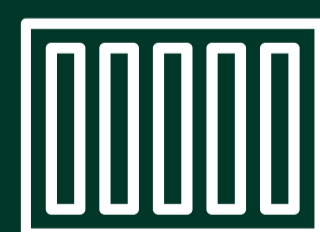
Climate change

Over the next 25 years we expect more extreme rainfall.



More homes

Estimated 310,000 new homes by 2030.



Highway run off

28% more annual run off than the rest of the country. Thousands of pipes and soakaways discharge rainwater straight into rivers and fields.



More people

1 million extra people in the next 25 years.



Farming practices

Slurry runoff and non sustainable practices can create water quality challenges.

Our plans for Barrow

We'll be exploring a variety of techniques to improve Barrow's water quality.

Removing surface water

This work involves separating surface water from the combined sewer system which means that the 'clean' water can be removed from the drainage system and only the 'dirty' wastewater is taken to the wastewater treatment works. This is a more efficient and sustainable approach to managing flows.

It will involve 're-plumbing' drainage pipes from roofs, car parks, highways and other hard standing areas to remove them from the sewer system and re-connecting them to discharge into water bodies.



We may be able to reduce the size of the storage tanks if we are able to remove excessive surface water flows from the wider system.

Main image: Example of a storm tank we have built in Blackpool

Below: Reinstatement of the storm water tank in Blackpool

Building more storage

Building new storage tanks to hold more water is a more traditional approach. Wherever technically possible, we try to bury these big tanks underground to minimise the visual impact.

There are a few things we need to consider when developing our options:

- Ground conditions can make excavations difficult.
- Some of these improvements will require large working areas, often with land we don't own so we need to work closely with landowners and local communities.
- Planning applications and environmental designations.

Did you know we've already built underground storage tanks in Windermere and Blackpool?



What our work will involve

You may see us and other partners carrying out investigations. These will involve:

- **Site surveys** – these are non-intrusive surveys completed by specialists, including geotechnical and ecology specialists. The purpose of initial site surveys is to understand what further investigations or surveys may be required to inform the design.
- **Ground investigations** – these include digging boreholes and trial pits, to understand the ground conditions such as soil properties and the water table level. You may see welfare cabins and machinery in localised areas. When the ground investigation is complete, the area will be returned to normal.
- **Surface water investigations** – this will involve CCTV surveys to fully understand the connectivity of existing drainage. This will be carried out by our team, often in the highway as that is where most of our sewers are located. We have already completed the first survey area which consisted of 3044m of CCTV, 105 highway drains and 70 rainwater downspouts.



What you can do to help?

We can all play our part to help improve the water quality in our local rivers and waterways. From volunteer work to being more conscious of what you put down the drains, there are lots of things we can do to make a difference.

- **Stop the Block**

Wet wipes, period products, fatty food waste – all of these things should go in the bin and not down the drain.

- **Misconnections**

If you're planning some home improvements which include connecting waste pipes to the drains on your property, please take time to check that you're making the right connection.

- **Let your garden grow**

Gardens are great at soaking up rain. But paving, tarmac and concrete can increase the amount of rainwater that flows into the sewers. Leave space for plants and allow driveways to drain into borders.

- **Septic tanks**

If your house or business has a septic tank you need to look after it. Call of Nature provides advice on how to maintain a healthy non mains system and hints on what to look for if yours is not operating effectively.

- **Volunteering**

Take a look at your local rivers trust to see how you can get stuck in and help improve your local river.



Keeping you informed

How will I be impacted?



During the construction phase, we may need to restrict parking areas and put traffic management in place to allow us to carry out our work safely. We will work with local communities to understand and mitigate any disruption.

We may need planning permission for some of our sites. For these we will engage through the formal consultation process, on a site-by-site basis starting Spring 2025.

We'll be hosting more public events



As our plans develop, we'll be hosting more drop-in sessions for you to learn more details about our proposals. Stay tuned for more on this coming soon.

Keeping you informed



We'll be keeping you regularly updated with our progress.

Visit unitedutilities.com/actionplanforbarrow for all the latest updates.

