

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.



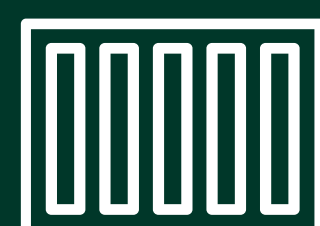
Climate change

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.

Why do we need storm overflows in Barrow?

Storm overflows have been a feature of the sewer systems for over **150 years** acting as a pressure relief valve to protect homes and businesses from the risk of flooding when there's too much rainfall.

Over the next **25 years** we expect more extreme rainfall events, increasing in severity



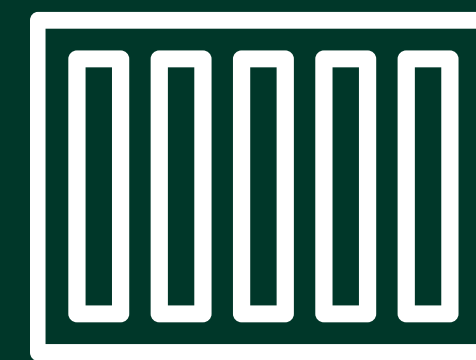
Over half of our sewer network, **54%** is combined so it fills up more quickly when it rains



We have **40%** more overflows than the industry average

Being a rainy region, Met Office data shows the amount of water running into our sewers is **28% higher than elsewhere in England and Wales**

Sewers are typically **no more than 15% full** during dry conditions so it's heavy rainfall that causes overflows to operate



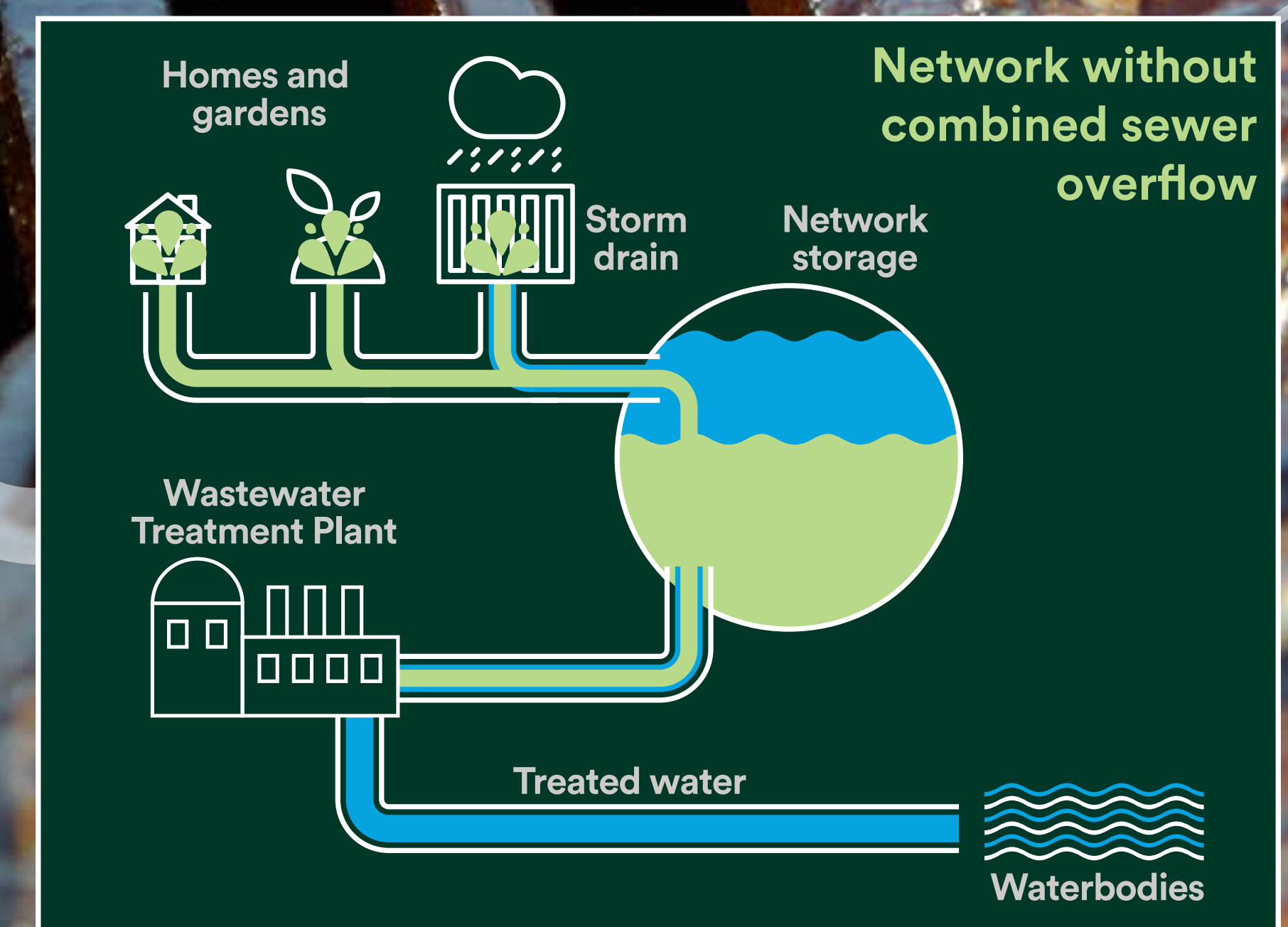
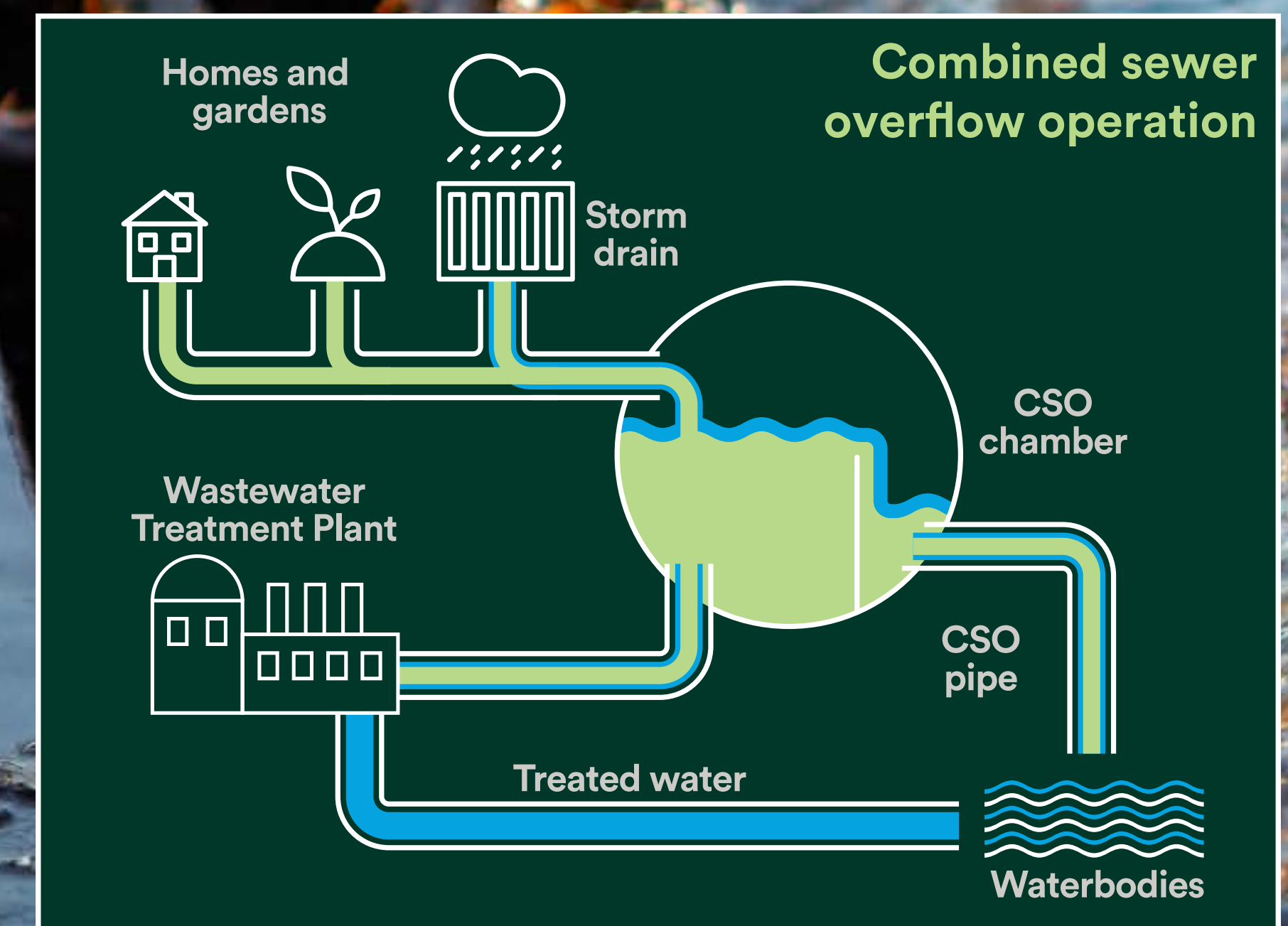
Our work in Barrow will see improvements to **21 storm overflows in 9 locations across** the Barrow catchment, reducing spills and enhancing water quality in the Walney Channel, Irish Sea and Morecambe Bay.

We're listening...

We've been listening to what people say - and no-one wants to see sewage from storm overflows discharged into rivers. We get that and have ambitious plans to tackle this - getting set to deliver the largest environmental improvement in the country from 2025.

It will need a re-plumb of the drainage system across the North West to achieve this.

This is similar to the switch from diesel to electric vehicles, so it can't happen overnight - but we remain committed to bringing about the improvements everyone wants to see so that we can all enjoy our region's waterways.



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?



Starting at Rampside

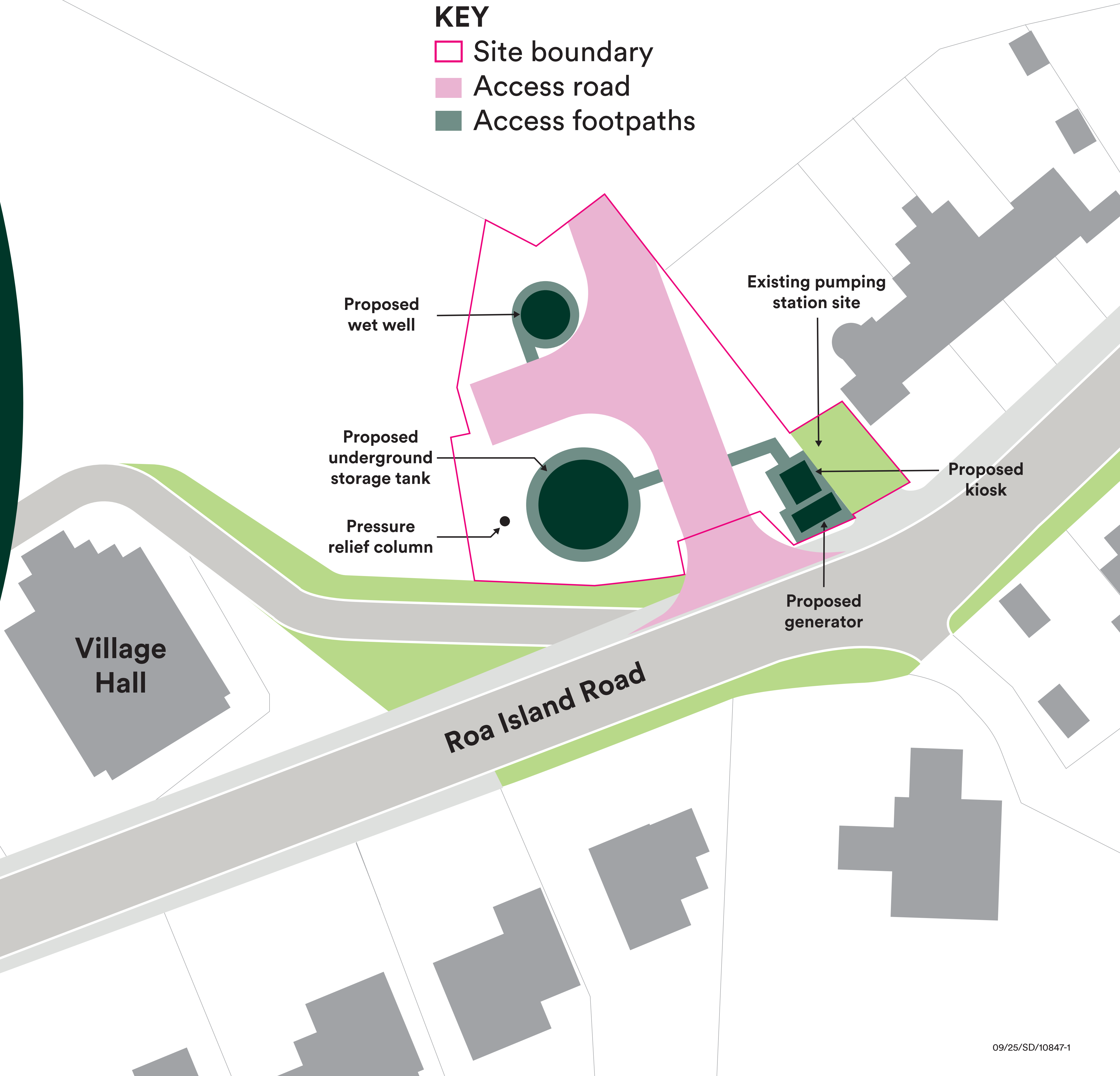
We are working to improve water quality in Barrow by reducing storm water spills. At Rampside we are preparing the way for new underground storage to complement the existing pumping station.

We're proposing to build a new 10 metre diameter storage tank which can hold around 550m³ - approximately the size of one standard leisure centre sized swimming pool! This storage tank will store storm water when we have heavy rainfall, preventing our system from being overloaded with excess water.

Upon completion, the site will be mainly landscaped back to grass with a fenced compound containing a kiosk. This site will be accessed by a new access gate off Roa Island Road.

Here's what it will look like

- KEY**
- Site boundary
 - Access road
 - Access footpaths



Carrying out the project considerately and safely

We understand that construction activity can be disruptive and our teams will do all they can to minimise the impact on the local community and road users throughout the project



When will we be working?

Our normal working hours are 08:00 to 18:00 Monday to Friday. We don't currently anticipate a need for working weekends or public holidays. Should we need to undertake works outside of our usual working hours we will notify you in advance.



What can we expect?

The majority of works will be undertaken in the site boundary, however there will be certain activities that require traffic management. During busy periods we will actively manage this to keep delays to a minimum.



During working hours there will be an increase in construction noise. We will implement processes to monitor this and mitigate excessive noise where possible.



Construction sites can be messy and dry weather can cause dust. We will implement mitigation measures to suppress dust and minimise dirt leaving site.



We will keep you informed of any changes to our scheduled work which may affect you.

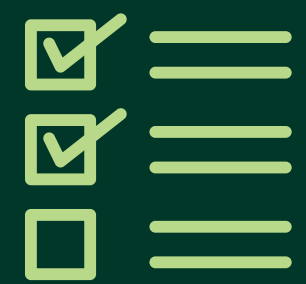
Image shows an example of a completed storm tank we have built in Blackpool.

What our work will involve



Will it smell?

The storage tank will be located below ground and only used during periods of heavy rainfall when the sewers are overrun with surface water. This makes the risk of odour low.



How often will the site be visited once works are complete?

We currently anticipate that the site will be visited annually, for routine maintenance checks.



Proposed timeline (*subject to change)

- **Autumn 2025**
Ground investigations and planning permission submitted
- **Winter 2025**
Further investigations and surveys to support the detailed design
- **Early 2026**
Enabling works to commence
- **Spring/ Early Summer 2026**
Main construction works begin
- **2028**
Planned completion



Will it be noisy?

In case of a power outage there will be a generator permanently on site. This will only run in the event of a power outage if the tank requires draining. Any general maintenance of the generator will be completed during normal working hours.



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.

