

Climate Adaptation Report

Summary
for customers

Published January 2025



YorkshireWater

How to view this document

Contents page

Our contents page links to every section within this document. Clicking on a specific section will instantly take you to it.

- 1 Click on the contents button to return to the contents page.
- 2 This button takes you to the previous page.
- 3 This button takes you to the next page.

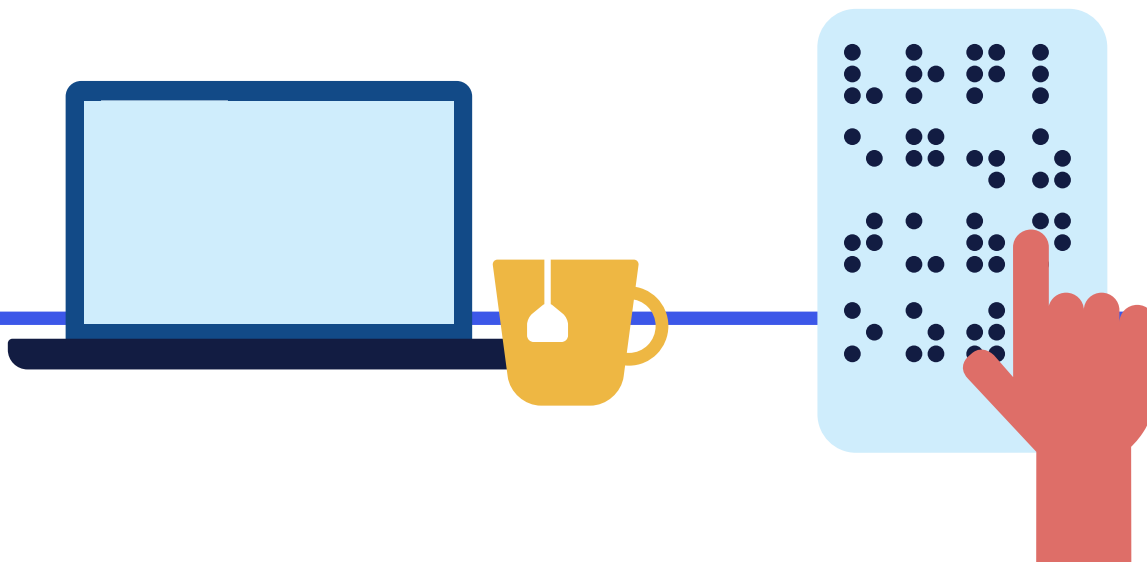
There are also many other clickable links within this document which we've made easy to spot by underlining and **highlighting** them in blue.

Accessibility matters. That's why we want all of our customers to be able to engage, navigate, and understand our Climate Adaptation Summary Report.

By using assistive technology like screen readers, text-to-text speech programmes and Braille displays, we can provide equal access to anyone with visual, mobility, or cognitive impairments.

We've taken steps to ensure this document supports additional accessibility needs:

- Screen readers will recite content in a logical order, as well as identifying headers and providing alternative text for images.
- Table of contents and bookmarks to aid navigation.
- Easy-to-read text that's structured using headings, clear paragraphs and tables.
- Comfortable colour contrast.



Contents

We've created colour-coded sections to help you to navigate this report easily. Just click on the section you are interested in on the contents page, and it will navigate you to that section.

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CEO foreword

I'm pleased to share this summary of Yorkshire Water's latest Climate Adaptation Report with you.

Too much. Too little. Too dirty. These are the things I hear people say when they are remarking on flooding, droughts, and discharges into rivers and seas from combined sewer overflows, all of which could be made worse by climate change.

So far, we've focussed on making our infrastructure more resilient to flooding (by putting in flood defences and working with nature to manage flood risk), reducing discharges into rivers and seas from combined sewer overflows (where we've invested £180m on top of our previous plans just in the last two years), safeguarding drinking water supplies and helping our customers save water to make sure there's enough for everyone.

We've also considered the impacts of climate change on our supply chain and other sectors we work with to ensure that we're resilient to problems they may face (such as power outages during a storm) and that we can provide our customers with the support they need during extreme weather events.

We have more to do in all of these areas and have detailed plans over the next five years for each – all of which are aligned to our long-term plans for the whole network to ensure we can deliver safe, reliable, affordable services to our customers now and in the future. You can find further information about our climate adaptation plans in the full version of this report [here](#).

Securing a climate-resilient future for Yorkshire is not a task we face alone – we need to collaborate with others to address our shared challenges. Partnerships are central to the way we operate, which is why I want to continue working with stakeholders to address climate risks and build resilience across the region.

Together, I'm confident we can adapt to the challenges of climate change and achieve our vision of a thriving Yorkshire, right for customers and right for the environment.

Nicola Shaw CBE
Chief Executive Officer



About Yorkshire Water

We provide some of life's most essential services to the people and businesses of Yorkshire and the Humber, playing a key role in the region's health, wellbeing, and prosperity.

We do this by supplying water and wastewater services to over 5 million people and 140,000 business properties, as well as looking after essential infrastructure and the natural environment.

**Our vision is to create
'A thriving Yorkshire:
right for our customers,
right for the environment'.**



< Our climate challenges >

Our world is changing quickly and we're already seeing the effects of climate change across the Yorkshire region. In recent years we've experienced several extreme weather events, such as the first drought in Yorkshire for more than 25 years as well as multiple storms that caused widespread flooding.

The latest climate projections show average temperatures in Yorkshire will be between 2°C and 4°C higher by 2100, with drier summers and wetter winters.

As the climate changes, so do the risks to our business and the services we provide. These include increased customer demand for water during hot dry periods, changes in the water quality of rivers and reservoirs, additional pressure on our wastewater network during heavy rainfall events, and physical risks to our infrastructure.

We also face further climate-related risks associated with society's transition to a low-carbon global economy, as well as risks from other sectors on which we rely.



Low reservoir levels during the 2022 drought

Together, these challenges underscore the need to adapt to climate change and ensure we can continue to provide safe, reliable, and high-quality services to our customers in the years ahead, while also safeguarding the environment on which we all depend.



Adapting to climate change

In recent years we've made significant progress to adapt to climate change across all areas of our business, as well as helping to build climate resilience among our customers and local communities.

We know there's more to do, which is why we've integrated climate change into all our long-term plans, including our £8.3bn investment in Yorkshire between 2025 and 2030.

Here, we outline the main ways in which we're preparing for the impacts of climate change.



Securing safe and clean water supplies

Climate change is one of the largest risks to maintaining safe and reliable water supplies to our customers over the long term, with summers expected to become hotter and drier in future compared to today.

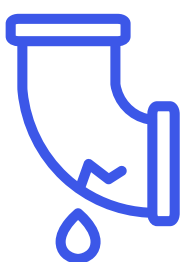
We've made good progress in managing risks to water supplies in recent years. For example, we're on track to drive down leakage by 15% between 2020 and 2025, and our customers use less water each day than in most other areas of the UK.

Our latest [Water Resources Management Plan](#) sets out further measures we'll be taking to ensure resilient water supplies for our customers. These include developing new water sources, deploying over a million smart meters to help identify leaks and manage demand, and improving water efficiency.

We're also taking action to address climate risks to the quality of rivers, reservoirs, and groundwater sources. For example, warmer temperatures can increase algal growth, while more extreme storms may increase runoff of nutrients and other pollutants. We're working with local partners to manage risks to water at a landscape scale, such as by restoring peatlands to stabilise soils and collaborating with farmers to reduce the impact of agricultural operations on water quality.



12.7%
Leakage reduction since 2020, and on track to achieve 15% by 2025.



1.3m
smart meters to be installed by 2030 to manage demand and help our customers save water.



11,000ha
of land conserved or enhanced since 2020 to safeguard water supplies and benefit nature and local communities.



Smart technology for sustainable water management

Securing sustainable water supplies for all our customers across the region is really important to us – today, tomorrow, and in the long-term. We’re using the latest smart metering technology to help us plan and manage water demand to make sure there’s enough for everyone.

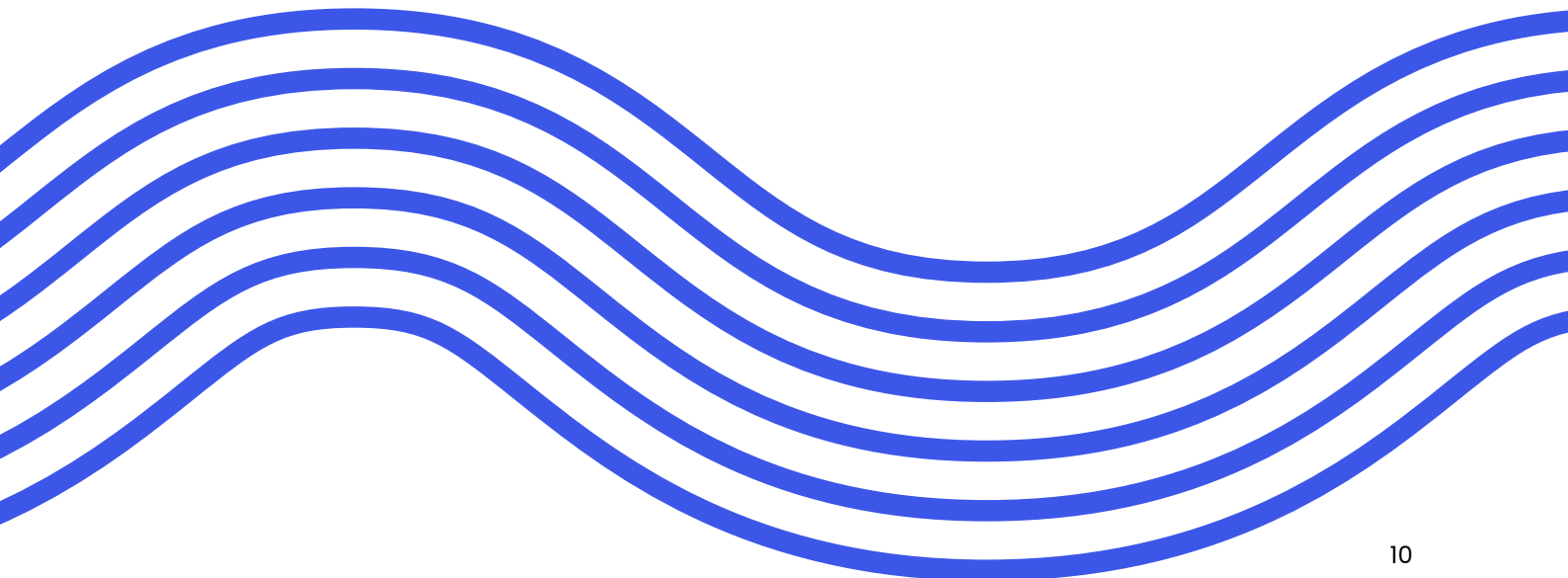
Our Yorkshire-wide smart metering exchange programme is now underway. Between now and 2030 we’ll be installing over a million household smart meters for our customers across the region. Smart meters will provide customers with real-time visibility of their water usage across the day, giving them greater control and helping them to save money on their bills.

As an added benefit, we’re using the data provided by smart meters to identify potential leaks within customer properties. This gives customers a chance to fix their leak sooner, saving money, avoiding bill shocks, and reducing the chance of costly damage to their property.

Supporting our customers to improve their water efficiency and driving down leakage across our network means we need to treat and supply less water, helping us to build resilience to climate change and increase long-term water security for the region.



For more information, please visit the dedicated smart metering section of our website [here](#).



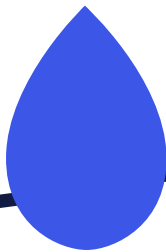
Maintaining resilient wastewater services

We collect, treat and return to the environment 2.2 billion litres of wastewater and rainwater every day. Climate change will bring more intense and frequent rain to our region, which is why we need to ensure our wastewater network and treatment works have capacity to cope with the larger volumes of rain we expect to see in future.

Our Drainage and Wastewater Management Plan sets out how we'll adapt our wastewater network to ensure we can continue to deliver safe and effective wastewater services to our customers while protecting the environment.

Our plan is designed to manage and reduce the amount of rainfall entering our sewer network, while also expanding the capacity of our network and treatment works. We'll do this through:

- investing in Sustainable Drainage Systems (SuDS) which filter and store rainwater and help prevent rainfall from entering the sewers.
- increasing how much wastewater our sewer network can hold and how much our treatment works can treat.
- inspecting our sewers and using sensors and alarms to provide real-time insights so we can plan maintenance before problems occur.
- using nature-based solutions such as wetlands to manage and treat wastewater in a more environmentally friendly way while also providing benefits for nature and local communities.



40,000

Customer sewer alarms installed

to help identify and address potential flooding incidents before they occur.



£180m

Additional investment to reduce wastewater discharges

by 2025, with a further £1.46bn by 2030.



20% of our

programme to reduce storm overflow discharges delivered

using blue-green infrastructure between 2025 and 2030.



Nature-based solutions for stormwater management

During periods of extremely wet weather, sewers can become inundated and discharge temporarily into the environment to prevent flooding into properties. These discharges could occur more often given the more frequent, heavier storms we expect to see in future – highlighting the need to adapt our wastewater network to ensure we can continue to protect the water environment.

To reduce the number of storm discharges during periods of prolonged or heavy rain, we're working with nature to store, filter, and slow down water to relieve pressure on our wastewater network. For example, we're creating sustainable drainage systems to slow and hold excess water during periods of heavy rainfall, and also creating new wetlands to provide extra storage for stormwater.

We're planning to invest £1.46bn to reduce storm discharges at over 480 sites between 2025 and 2030. Through our increasing use of nature-based solutions, we aim to build climate resilience to more extreme rainfall events expected in future while also supporting local wildlife and improving the health of Yorkshire's rivers, seas, and coasts that are valued by our customers and communities.



Elements of this image from Google, Bing, LinkedIn, OpenStreetMap, Data 250, NOAA, US Navy, NOAA, GEBCO

Increasing the resilience of our infrastructure and communities to flooding



Many of our treatment works and pumping stations are located in areas that are vulnerable to flooding, which could be made worse by climate change. We've invested in flood resilience measures at our higher-risk sites in recent years. These include raising sensitive equipment to protect it from high water levels and creating flood plans for our vulnerable infrastructure, including the use of temporary flood defences.

We're also working with partners such as the Environment Agency and local councils to develop flood response plans for areas across the region that are particularly prone to flooding such as York, Tadcaster, and Hull. These plans help us to manage potential flooding incidents in each area by protecting our operational assets and reducing flood risk for local communities.

At a landscape scale, we're using natural flood management techniques to slow the flow of water and reduce the risk of flooding to our infrastructure and local communities. For example, through our Landscapes for Water partnership programme with the National Trust, we're installing leaky dams, planting native trees, and restoring peatlands to slow and store water in upland areas across Yorkshire.

Working in partnership to build climate resilience in Hull

Hull in the east of Yorkshire is at risk from extreme flood events and its communities are among the most vulnerable to climate risks in the UK.

Through the Living with Water Partnership, we're collaborating with Hull City Council, East Riding of Yorkshire Council, the Environment Agency and the University of Hull to build flood resilience for communities in Hull and the East Riding.

In January 2023, a pioneering Living with Water scheme began at Rosmead Street in Hull with the installation of an entirely permeable residential street at risk of flooding. The permeable paving is made of non-porous blocks with spaces between them to allow water to flow through. Surface water is collected underneath and the flow of water into our sewers is then controlled to reduce the likelihood of flooding.

The scheme, delivered with the support of partners including the local council, is a demonstration of how the water sector can help deliver wider benefits for customers, including increased resilience from extreme weather events and opportunities for community engagement.

Building on the successes of Living with Water, we're now expanding our partnerships approach to help improve climate resilience in other areas of the region.

For more information, please visit the [Living with Water website](#).



Responding to extreme weather events

We work hard to ensure that our infrastructure and operations are resilient to extreme weather events and that we provide the right support to our customers when dealing with a loss of supply or other service impact.

We manage all incidents, including climate-related incidents, in line with our Company Incident Management Plan, which provides a framework to allow us to effectively respond to, recover from, and learn from any incident across all areas of our business.

For extreme weather events such as rain, ice, snow and wind, our Severe Weather Plan sets out the arrangements we'll put in place to coordinate an effective response and resolution.

We engage with other water companies through our participation in National and Platinum Incident Management Groups. These groups let us share knowledge, learning and challenges. We also attend Local Resilience Forums across Yorkshire where we work together with other services and local authorities to prepare for and respond to extreme weather events.

During all incidents, the health and wellbeing of our customers and colleagues is our primary concern. We hold emergency equipment such as temporary flood defences and bottled water placed strategically across the region for a fast response. We also have a dedicated team to support customers in the event of a loss of supply. For customers that are unable to collect water and have registered to receive priority services, we provide doorstep deliveries to make sure everyone is able to access our essential services in a way that meets their needs.

If you want to know more about our Priority Services Register and how we can help, please [click here](#).



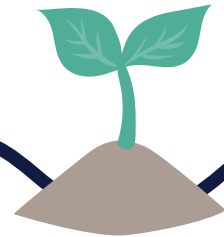
Progressing to a low-carbon economy

We have a big role to play in addressing climate change and we're working to reduce our carbon emissions as we aim for a net-zero future by 2050.

As the world moves to a low-carbon economy, it brings potential for new government policies, environmental protection regulations, the introduction of carbon taxes, and changes in customer attitudes. These are known as transition risks.

We know that taking early action to reduce our carbon emissions will help to reduce the potential impact of these transition risks in the future. That's why we're working hard to drive down carbon emissions in our operations, the products we buy, and across our wider value chain.

Our plans include tackling emissions at wastewater treatment works, transitioning our fleet to electric vehicles, and installing heat pumps at our sites. We're also investing in energy efficiency measures and renewable technologies such as solar, wind and hydropower across our operational sites, with a self-generation target of 40% by 2030.



Shared risks with other sectors

Adapting successfully to climate change is not something we can achieve by ourselves. We rely on many different sectors to ensure the smooth running of our business, and in many cases those sectors are equally dependent on the essential water and wastewater services we provide to them.

Making sure we can identify and understand the relationships between different sectors is important to understanding how the impacts of climate change in one sector might affect another. For example, a storm can lead to damage and loss of power from electricity stations which can then cause our water treatment works and sewage networks to stop operating. Similarly, extreme weather events elsewhere in the world may impact our supply chain and reduce the availability of goods or commodities needed for water and wastewater management.

We're developing our understanding of these dependencies to help us reduce cross-sector vulnerabilities and improve our resilience to climate change. Where possible, we look to collaborate with others to develop joint responses to climate related risks. This includes, for example, our ongoing work with Local Resilience Forums, community-based partnerships, regional water resource planning groups, strategic suppliers, and other water companies.

Supporting our customers to adapt to climate change

We all have a role to play in responsible water and wastewater management. Here we highlight some of the ways in which we're supporting our customers to manage their water usage, save money on their bills, and help to protect the environment.

Water meters

Our customers with a water meter typically use around 40 litres per person per day less than those without.

For most of our customers we're able to provide a meter free of charge. And starting in January 2025, we'll be upgrading over a million meters to become smart, providing customers with a detailed breakdown of their water usage across the day.



Water saving packs

We offer free water saving packs to our customers to help them reduce water use in their homes. From shower regulators to cistern bags to leaky loo detection strips, these simple products can make a real difference in cutting household water use.



Tips and advice

We provide our customers with a range of useful information to help them save water in their homes and gardens. These include fixing leaky appliances, lagging pipes in winter months, and using a watering can instead of a hosepipe.



Water butts

Collecting rain in a water butt is a great way for our customers to save water and make sure they have plenty for their gardens during drier weather. As an extra bonus, water butts can also reduce excess rainwater entering our sewers, which helps to lower the risk of surface water flooding for local communities.



Community engagement

We offer free education programmes to local schools to help young people learn about the value of water and how they can support us in looking after our water resources and doing the right thing for the environment.



Report a leak

With over 30,000km of water pipes across the region, our customers often spot leaks and bursts before we do. We make it easy for people to report leaks to us, because the sooner we know about a problem the sooner we can fix it.



Conclusion

Climate change has the potential to affect almost every area of our business, which is why it's so important that we adapt and prepare for the challenges we're likely to face in the future.

As part of our £8.3bn investment in Yorkshire between 2025 and 2030, we'll be taking further action to enhance our resilience to climate change. This includes safeguarding regional water supplies, reducing the risk of flooding during heavy rainfall events, embracing new technologies for smarter infrastructure management, and helping our customers to use water more efficiently.

We're mindful of the additional pressures this will place on customer bills. Our plans have been designed with fairness and affordability in mind, and we're making extra support available for our customers who need it.

Partnership working is at the heart of our climate adaptation plans. We'll continue to look for opportunities to collaborate with others, helping us to adapt to climate change while delivering wider benefits for nature and local communities.

Working together, we're confident we can secure a climate-resilient future for Yorkshire.



Find out more about how we're adapting to climate change in the full version of our **[Climate Adaptation Report on our Climate change and carbon webpage](#)**



For further information about how we're progressing with our climate adaptation plans, we report performance against our targets each year in our **[Annual Performance Report](#)**.

Thank you for reading



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YorkshireWater