
Our Purpose 2023/24

**NORTHUMBRIAN
WATER** *living water*

**ESSEX & SUFFOLK
WATER** *living water*



WELCOME FROM HEIDI

Our Purpose is at the core of everything we do and we use it as the compass to guide decision-making.

While we strive to live our Purpose, we know we, and the water industry, need to do better to meet the expectations of our customers and minimise the impacts we have on our environment.

Welcome from Heidi

The scrutiny regarding water companies and the environment continues and we need to work hard to regain the trust of our customers and stakeholders. In the recent CCW Water Matters deep dive, we are the leading company most trusted to do what's right for the environment in England and Wales. We ranked as having the lowest percentage of customers (10%) believing we were responsible for most/all river pollution and over half of customers were satisfied we're minimising sewer flooding.

At Northumbrian Water Group, our people are united by our unwavering commitment to excellence in serving our communities and safeguarding the environment.

That is why we have put forward a very ambitious business plan that would see us making £80m worth of investment targeted towards reducing our use of storm overflows and upgrading our wastewater network this year and next.

This will be followed in 2025 by a further c.£1.9 billion of investment, more than 10 times the scale of the current programme, to take the number of average spills in the north east down to the lowest in the sector by 2030.

It is essential we get the right balance between investing in our services, environmental improvements and the affordability of customer bills. This is not easy and it's important that the views of our customers inform those decisions. Through our engagement with our customers our plans reflect what they have and told us is important to them. Drinking water quality is consistently rated amongst our customers' highest priorities and it is evident that there is increasing backing for environmental enhancements. The balance between promoting sustainability and managing customer bills is a delicate one and ensuring affordability and providing financial assistance are key priorities for us.

We set ambitious goals for the period 2020-25, reflecting feedback from our customers, and I am pleased that we have delivered a number of successes in the past year in living up to our Purpose.

Caring for the environment is at the heart of what we do as a business. This year, we published '[Restore and Regenerate: Our Environment Strategy to 2050](#)'. This strategy builds on our past achievements and sets a clear path for the future, focusing on our key environmental priorities which cover minimising the impact our operations have on the environment, reducing the amount of water we take from the environment, creating healthy catchments, rivers and coastal waters, taking meaningful climate action, reducing our resource use and helping nature to thrive.

Our partnership approach is crucial to our goal of fostering successful regional economies. We exceeded our target of spending at least 60p of every £1 with local suppliers, highlighting how we leverage our operations to drive local economic growth and social value. We also sustained our significant annual investment in our communities, contributing time, expertise, and resources to important causes, with 35% of our colleagues participating in volunteer work.

These achievements are only possible with the right people, equipped with the right skills, thriving in a supportive culture that enables them to deliver customer-focused business objectives and adapt to an evolving workplace. I am immensely proud of the work my colleagues do every day, often in challenging conditions, to ensure our customers receive reliable and affordable water and wastewater services.

This report is intended to give our stakeholders a clear view of how we are upholding our Purpose. It complements our [Annual Performance Report and Financial Statements](#), which offer detailed insights into our regulatory and financial performance.

We hope you find this account of our work over the past year informative and engaging. As always, we welcome any comments or questions you may have.

Heidi Mottram CBE
CEO



WATER FORUM STATEMENT

The Water Forum is an independent Customer Challenge Group (ICG), and we welcome Northumbrian Water's publication of an Our Purpose Report each year – alongside the [Annual Performance Report](#), it gives customers a good opportunity to form a view about how well their water company is performing and what it is doing to improve.

Water Forum statement

The company has stated its Purpose – that it exists to ‘care for the essential needs of its communities and environment, now and for generations to come; doing this by providing reliable and affordable water and wastewater services for customers; and making a positive difference by operating efficiently and investing prudently, to maintain a sustainable and resilient business.’

There are many positive, fresh and innovative examples of how it is delivering against the different elements of this Purpose, which you will read about in this report. For example, the ‘No Dig’ innovation to fix leaking pipes, the use of drones to sample river water quality in Project Kingfisher, and the smart sewer project that’s focused on reducing the use of storm overflows and their environmental impact.

These innovations sit alongside the company’s continued delivery of successful approaches started in previous years, such as ‘Bin the Wipe’, which is preventing sewer flooding of customers’ properties; and the partnership working to support customers in vulnerable circumstances.

That said, there is a mixed picture when it comes to performance, and it has slipped in some areas. When asked directly for their opinions about how well Northumbrian Water is delivering against its Purpose, customers have spoken loudly – the results of the [tracking survey](#) show the company fell short of its own targets in all three areas and performance in two of them worsened compared to last year.

We recognise that these results are against the backdrop of a lot of public attention on the water industry and have encouraged the organisation to engage further with customers to understand the scores in more granular detail and to build trust.

The water companies and Ofwat remain in the process of agreeing business plans for 2025-2029, which will determine the size of customers’ future water and sewage bills. But we already know that the country will see an unprecedented level of industry investment in the next five years; and that this comes on the back of a cost-of-living crisis which means that 14% of Northumbrian Water’s customers are now in ‘water poverty’.

Issues such as these mean that being innovative, smart and efficient with customers’ money in delivering this investment will be key; as will establishing meaningful solutions for supporting customers who find themselves in vulnerable circumstances.

Through the Purpose-led approaches in this report, the Water Forum is encouraged that the team at Northumbrian Water is focused on both important matters, and we will continue to provide constructive, independent challenge in the year ahead.

Melanie Laws
Water Forum chair



ABOUT US

Our vision is to be the national leader in sustainable water and wastewater services.

About us

Our vision is to be the national leader in sustainable water and wastewater services.

We provide water and wastewater services to our customers in the North East of England, trading as Northumbrian Water (NW), and water services only to our customers in the south east of England, trading as Essex & Suffolk Water (ESW).

We employ over **3,000** people.

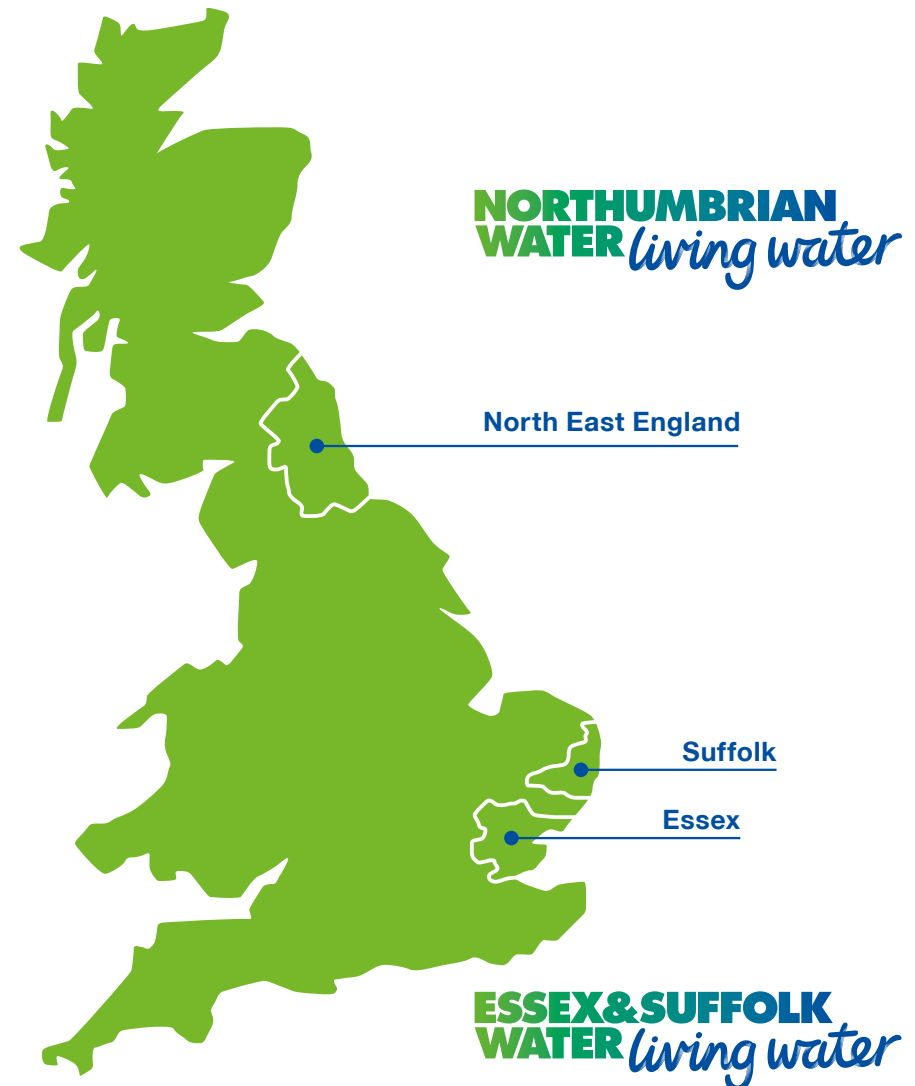
NW supplies water and wastewater services to **2.7 million** people in the major population centres of Tyneside, Wearside and Teesside as well as the large rural areas of Northumberland and County Durham. In Hartlepool, we only provide wastewater services.

ESW supplies water services to **1.8 million** people in Essex and **0.3 million** in Suffolk. Our Essex area is part rural and part urban and includes the main population centres of Chelmsford, Southend and the London Boroughs of Barking and Dagenham and Havering and Redbridge. Our Suffolk area is mainly rural with the largest towns being Great Yarmouth and Lowestoft.

We operate and maintain:

- **50** water treatment works;
- **388** water pumping stations;
- **304** water service reservoirs;
- **26,451km** of water mains;
- **413** sewage treatment works;
- **966** sewage pumping stations; and
- **30,237km** of sewers.

Every day we supply **1.1 billion** litres of water.





OUR PURPOSE

Our Purpose statement sets out a shared understanding of why our company exists. The Our Purpose report describes performance against a series of progress measures and detailed case studies of how we live this out in practice.

Our Purpose

Our Vision sits alongside our Purpose and clearly sets out what we want to achieve, to be the national leader in the provision of sustainable water and wastewater services.

Our Purpose

Our Purpose is to care for the essential needs of its communities and environment, now and for generations to come; doing this by providing reliable and affordable water and wastewater services for customers; and making a positive difference by operating efficiently and investing prudently, to maintain a sustainable and resilient business

Our Strategic Themes

We aim to deliver our Vision through our five **Strategic Themes** of **Customer, Environment, Competitiveness, People** and **Communities**.

Our Values

Our Values set out how we behave in order to deliver our Purpose and Vision. These are well recognised and understood across the business.

Our Reputation

How we perform and how we behave underpins our Reputation which is of great importance. Building trust among our customers and wider stakeholders is crucial to achieving our Purpose.

Overall measures

We are committed to the highest standards of transparency and corporate governance so that our customers can trust that the information we provide them is accurate, and so they can hold us to account on what matters most to them.

Maintaining the highest standards of governance is crucial for the effective implementation of our strategy. It ensures that the Board makes decisions that foster sustainable long-term value for the mutual benefit of our customers, the communities we serve, our employees, and shareholders. Robust governance is the foundation of all our actions.

These metrics have been selected to measure governance and activity across our business.

Ethisphere and the Good Business Charter take a holistic view of business practices, accrediting companies for overall ethical conduct.

Building a high level of trust among our customers is crucial, as it influences their perception of our performance and their willingness to heed our messages on issues such as water conservation and the proper disposal of unflushable items.

We also seek customer feedback on how strongly they agree that we uphold each of the three key statements in our Purpose. This feedback provides valuable insight into whether customers believe we are fulfilling our commitments.

We are disappointed to note a further decline in agreement with these statements and an increase in customers who are undecided. In the coming months, we will focus on enhancing our communication with customers about the aspects of our Purpose that are most important to them.

Overall statement			
Accreditations			
Ethisphere			
Good Business Charter			
Measures	2021/22	2022/23	2023/24
Independent Trust score	8.7	8.6	8.2
Purpose statement tracking in Omnibus survey:			
Cares for the essential needs of its communities and environment, now and for generations to come.	68%	61%	58%
Provide reliable and affordable water [NW: and wastewater] services for its customers	73%	66%	68%
Make a positive difference by operating efficiently and investing prudently, to maintain a sustainable and resilient business.	62%	53%	50%

Our Business Model





CARING FOR OUR COMMUNITIES

- 5.1** Exemplifying trust and unrivalled customer experience

- 5.2** More than just a water company - helping those who need it the most

- 5.3** Economic ripple effect

Caring for our communities

We recognise our vital role in the communities we serve. We provide an essential service, are custodians of the local environment, with almost all our employees and their families also our customers.

To evaluate our community impact, we use our results in the water industry-wide C-MeX measure of customer experience; and consider our broader economic impact on the local community by measuring the proportion of our spending on goods and services that goes to local suppliers, aiming for 60p of every £1 spent locally.

Caring for the communities we serve starts with giving our customers the best service and experience we can. We are pleased to have achieved third place in the industry for C-MeX. However, having been placed first in 2022/23, we are determined to improve in 2024/25, reflecting our long-standing commitment to delivering unrivalled customer experience. We are passionate about engaging with our customers to understand how they want us to deliver world-class customer service.

Our focus remains on getting things right first time, fast time, every time. We know our customers really value this and we always work hard to achieve it.

In the past year, we again achieved our ambitious local spend goal, reaching 61.74p in every pound spent in our North East, Essex and Suffolk operating areas.

Our community investment strategy focuses on areas which are at the heart of who we are and central to our Purpose. We deliver community investment activity in these areas through financial contributions, volunteering (including our Just an Hour volunteer scheme through which 35% of our employees supported 226 good causes), educational impact, and playing a leadership role.

As we have done for many years, we reinvested at least 1% of our profits into our communities, through activities such as our employee donation programme, Cheque it Out, and our funding programmes Branch Out, Bluespaces and our Community Foundations.

Our target is to increase participation in Just an Hour to 50%. We plan to achieve this through enhanced communication of volunteering opportunities, more targeted local activities for our sites, and a more visible way of measuring progress.

Caring for our communities			
Measures	2021/22	2022/23	2023/24
C-MeX	2nd – 84.46	1st – 83.74	3rd - 81.40
Local procurement spending (and impact)	60.34%	62.60%	61.74%

Over 1%

of profits invested in community activities

61.74p in every £1

spent in our communities

226

community causes supported by employee volunteering

5.1 Exemplifying trust and unrivalled customer experience

We are passionate about engaging with our customers and our focus remains on getting things right first time, quickly, every time. We know our customers really value this and we always work hard to achieve it.

We need our performance and our customer service to be consistent and to be consistently the best it can be. We know through continuous investment in customer service training, including neurodiversity awareness is delivering great customer experience, as shown in these examples:

Meet Amanda, a dedicated member of our customer care department. Amanda's commitment to excellence and compassion for our customers shines through in her interactions every day. Recently, Amanda identified a neurodivergent child through our Priority Services Register who lived near a local underground reservoir where our project work would result in increased works traffic.

Understanding the potential impact on the family, Amanda took proactive steps to ensure they felt supported and informed. In addition to sending out letters to all affected customers, Amanda personally reached out to the family to discuss how the work might

affect their child. The mother was deeply touched by Amanda's thoughtful approach, remarking that she had never experienced such personalised service from any utility company before. Amanda not only provided excellent customer service, she created trust with her personal touch, delivering an unrivalled level of care that left a lasting impression.

But Amanda is not the only one who embodies our values of trust and exceptional customer experience. Meet Gina from Wholesale and Ross from Plumbing Services, whose passion for their roles and dedication to our brand values have made a profound impact on our customers. Their exemplary service and commitment to excellence inspired a customer to apply for a role in our labs, a career path she had never considered before experiencing such exceptional service from Gina and Ross.

These stories are testament to the culture we have fostered, rooted in trust, empathy, and a relentless pursuit of customer satisfaction. With 81% of our employees agreeing that NWG is a great place to work, compared to just 54% of employees at a typical UK-based company, it's clear that our commitment to our people translates into exceptional service for our customers.



5.2 More than just a water company - helping those who need it the most

We have implemented innovative solutions to enhance customer service by integrating TransUnion (a credit bureau with access to past and present financial activity of customers) on our website. This partnership with TransUnion allows customers to verify their income online to check their eligibility for a discount, simplifying the application process and removing the need for cumbersome paperwork and reducing the need to contact us.

Our introduction of WhatsApp as a customer engagement channel has facilitated seamless communication, particularly for customers who struggle with traditional phone calls due to mental health or disability.

Ensuring universal accessibility of our digital platforms is a top priority. In 2023, we achieved Level A compliance with the Web Content Accessibility Guidelines 2.1 (WCAG) to enhance our website's accessibility for people with varying needs.

Examples of the fixes we carried out ranged from the way content looked on the page, adding text behind images to making sure our forms highlighted which fields were compulsory, to code that was needed in the system to display content correctly for all users. Our Level A compliance demonstrates our commitment to providing an inclusive online experience for all customers, marking a significant step toward becoming an accessibility leader. We're currently working on achieving Level AA.

Sophie, a member of our Voids team, (voids are properties which are registered but not billed) recently encountered a customer account raised by TransUnion. Upon contacting the customer, Sophie learned that he was facing significant challenges, including a serious damp and mould problem in his property, which had forced him to leave. Adding to his difficulties, he was in hospital with his young baby and currently homeless.

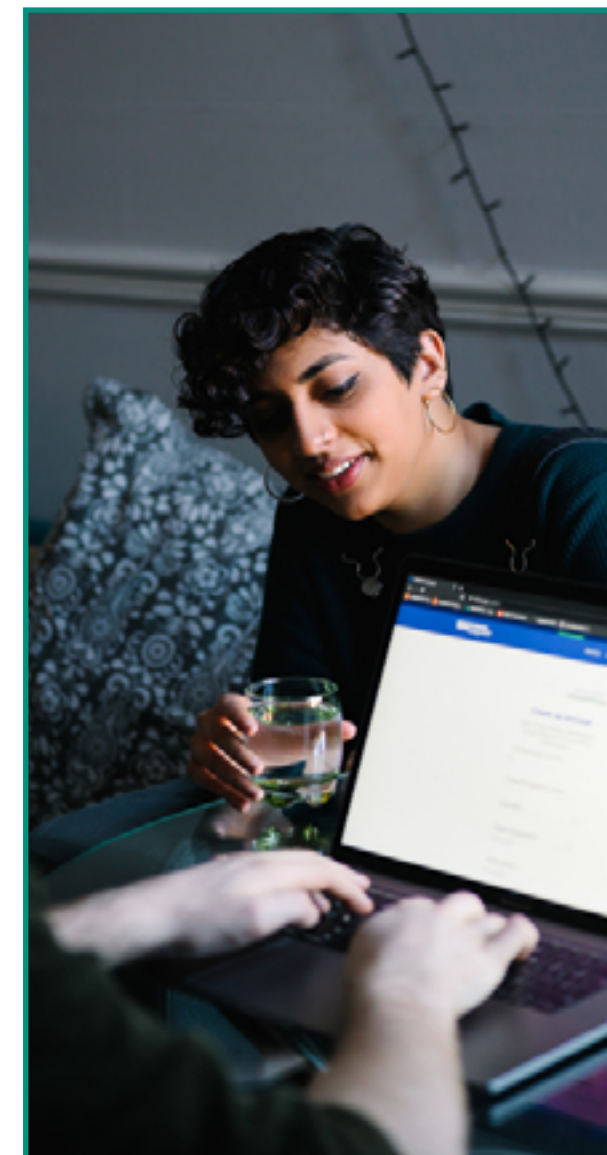
Demonstrating empathy and a commitment to support, Sophie immediately cancelled the charges on the customer's account and offered assistance.

To overcome a language barrier, she provided him with information on how to access alternative accommodation.

Drawing on the expertise of another team member, Rachel, who had previous experience in the housing industry, Sophie equipped the customer with contact details for private sector housing in Darlington.

Grateful for the support, the customer later reached out to express his appreciation. Thanks to the resources provided by Sophie and Rachel, he was able to secure an appointment to find new accommodation, offering him hope and stability during a challenging time.

By prioritising empathy, respect, and innovation, we continue to uphold our commitment to delivering exceptional service and supporting the well-being of all customers.



5.3 Economic ripple effect

Through our engagement with our local business communities, we've found overwhelming support and a great appetite for action amongst our peers. An example is being a founding member of the County Durham Pound (CD£) group of likeminded businesses, who share similar goals and work collectively to improve local spend and increase social value.

The CD£ won Best Public Sector Project award at the 2023 Social Value Conference and is now expanding to involve nominated local suppliers as 'supporters' and share social value resources and knowledge even further. As social value becomes a more significant part of the procurement process for many companies, doing this will support local suppliers to better engage with procuring organisations and win contracts.

This work combines into our responsible procurement strategy, which aligns to the UN's Sustainable Development Goals. Our strategy outlines what we call the 'Impact Initiative 7' (ii7), which sets key activities in seven areas - environment, local spend, diversity, skills, innovation, social value, and modern slavery, designed to help us, and our supply chain have the biggest possible positive impact.



6



CARING FOR THE LONG-TERM NEEDS OF THE ENVIRONMENT

6.1 Thriving catchments

6.2 Eyes to the skies

6.3 Investment project to reduce storm overflow spills is the first of its kind in the UK

6.4 Green energy expansion

6.5 Collaborative conservation in County Durham

Caring for the long-term needs of the environment

Our business could not be successful without a sustainable, high quality water environment. We take water from the environment, and after treating it to a high standard we deliver it to our customers for them to use as drinking water. We are then responsible for taking their wastewater away and returning it to the environment after a careful treatment process.

It is therefore essential that we protect this precious resource and pass on a thriving environment to future generations. By working with partners through our grant schemes - Branch Out, Bluespaces and Field to Tap - our holistic approach to supporting the environment has delivered improvements to public access, facilities, water quality and biodiversity.

Building on our previously strong performance in this area, we reduced our operational emissions to just 19.3 thousand tonnes of CO2e in the last year. Our first large-scale solar arrays across six sites, including our 9MW array at Broken Scar, were commissioned this year.

In September 2023 we launched ‘[Restore and Regenerate: Our Environment Strategy to 2050](#)’. It builds on what we had already achieved and sets our direction for the future – to achieve our environmental ambition:

“ **Together, we are restoring and regenerating our natural environment, creating a better place through our actions.** ”

The strategy has five Environmental Priorities that contribute to this ambition:

- Water management for the environment and people;
- Healthy catchments, rivers and coastal waters;
- Effective climate action;
- Valuing resources and eliminating waste; and
- Thriving nature and communities.

We committed to significant investments in the current regulatory period to minimise our reliance on storm overflows and enhance our wastewater infrastructure. However, we know that we need to move faster and have proposed a substantial increase in environmental investment in our business plan for the next five years (2025-30), and beyond.

In 2023/24, we are very pleased to have had no serious category 1 or 2 pollution incidents for the second successive year. Our bathing waters continue to be amongst the cleanest in the country with 32 out of 34 classed as Excellent or Good. Additionally, we’re proud to have started our groundbreaking venture into drone technology for real-time water quality assessments, marking a significant milestone in the utilities industry. You can read more on [page 20](#).

We are pleased that the Environment Agency again gave us a 3 star rating in its annual Environmental Performance Assessment; that CCW’s recent report placed us in first place for ‘cleaning wastewater properly’; that we again beat our target (by more than a factor of four) for delivering Water Environment Improvements; and that we remain fully on track with delivery of our water industry national environment programme (WINEP) investments.



Caring for the long-term needs of our environment

Accreditations

ISO 14001 Environmental management

Measures	2021/22	2022/23	2023/24
EPA star rating	4 star	3 star	3 star
Net greenhouse gas (GHG) emissions (reduction against 2019/20 baseline)	46,296	23,445	49,307
Pollution incidents per 10,000km sewers	22.98	19.98	32.97
Water environment improvements	34.6km	33.1km	45.6km
Bathing water quality	33/34	33/34	32/34
Per capita consumption (PCC)	4.7% increase to 157.7 litres	5.6% increase to 159.1 litres	2.5% increase to 154.4 litres

15,600

sewer blockages cleared, all due to wet wipes

No Cat 1 or 2

serious pollutions for two years

45.6km

water environment improvements

6.1 Thriving catchments

The Thriving Catchments Partnership is a collaborative initiative we launched with The Rivers Trust and partners across the North East of England. It focuses on improving river water quality and promoting healthy catchments through long-term investment, shared expertise, and collective action. By working together, the partnership aims to enhance the environment, build resilience, and support sustainable, positive change for rivers and communities across the region.

The challenge

The health of rivers in the North East has been impacted by factors including agricultural runoff, pollution, and land management practices. Addressing these issues to improve water quality and biodiversity requires not only significant investment but also collaboration across sectors to deliver lasting solutions.

Our approach

Thriving Catchments is built on the knowledge that no single organisation can tackle these complex environmental challenges alone. By bringing together over 30 experts and ten delivery organisations we are sharing skills, expertise, data and investment opportunities, joining up plans and creating a ripple effect that transforms the health and resilience of rivers and their catchments, benefiting the entire North East community and the wider environment.

The regional collaboration harnesses the strengths of multiple sectors, including water and agriculture, businesses, catchment partners, and local communities.

We're aiming for impact at scale. By 2038, the partnership will have moved 50 water bodies to 'Good' ecological status, benefiting not just the rivers but the entire North East community and the wider environment. We'll do this by identifying opportunities for a long-term programme of investment from 2025 onwards and by working together to develop sustainable funding models that work for partners and landowners over the long term.

Looking forward

The ambition of the Thriving Catchments Partnership extends beyond phosphorus removal, with a broader focus on enhancing catchment opportunities and creating a ripple effect of positive change. Through sustained collaboration and innovative funding models, the Partnership is helping to secure a future where rivers thrive, ecosystems flourish, and regional collaboration leads to long-term, sustainable environmental change.



6.2 Eyes to the skies

Our maiden test flight of a drone which is set to help improve the quality of the North East's rivers and coastal waters took place in January 2024.

In a world-first for the utilities industry, we have started exploring the use of drone technology to carry out at scale, real-time water quality assessments, in partnership with cloud data experts, Makutu, and Skyparts Drone Services.

The test flights came after months of ground-breaking research into how the uncrewed aerial vehicles (UAVs), or pilotless drones, will use sensors, artificial intelligence (AI) and data analytics to carry out a huge water quality monitoring programme of key coastal and inland locations.

Affectionately named Project Kingfisher by the partner organisations, for the way the drones hover and dip in and out of water, the project has explored how and what data the drones will collect, to help us respond quickly to potential issues.

Currently, we can only survey water quality by sending our people to manually take water samples from sites, which can prove difficult when they're a long distance away, in very rural areas, or during bad weather.

By using drones and clever technology, we expect improved access to hard-to-reach areas, a reduced carbon footprint and more data over a larger area with faster results.

The skies above Berwick-upon-Tweed, Bishop Auckland and Blyth will be the first to play host to Skyparts Drone Services' Speedbird Aero aircraft, which have a wingspan of 1.6m, in phase one of flight tests.

These tests will involve launching the drone in these areas, to then automatically visit several pre-programmed water sampling sites.

When at a sampling site, the drone will hover while key water quality tests are performed, before moving onto its next site. Meanwhile, the data collected will be fed back to us for analysis in near real-time.

Once phase one is successfully completed, the second phase of the trial can begin. This will see the demonstration of the service to scale - operating robotically beyond visual line of sight over a period of three months, without ground observers.

Richard Warneford, Wastewater Director, said:

“There’s a lot of hard work gone into understanding how UAV technology can be used to collect data efficiently, and these successful test flights have proven the validity of it as part of our huge water quality monitoring programme.

“We’re proud to be making history with this project and we can’t wait to begin rolling it out officially across the North East – it’s another step towards having the cleanest rivers and beaches in the country.”



6.3 Investment project to reduce storm overflow spills is the first of its kind in the UK

A ground-breaking £20m project is set to be the first of its kind in the UK. The project will see a combination of new technology, sensors and AI analytics used to lower the risk of overflows happening and is based upon research and proven techniques used in the United States.

In South Bend, Indiana, the smart sewer technology – sensors, AI analytics, control measures – were installed in a section of wastewater network with the aim of reducing the number of spills from storm overflows. Over a 10-year period, they saw an 80% reduction in the amount of spills with a combination of smart controls and targeted investment.

Here in the UK and across the world, storm overflows are used by water companies during times of heavy rainfall in order to prevent sewer flooding of customers' homes. They act as a relief valve on the wastewater network, and are used with Environment Agency consent to protect homes from the devastation that can be caused by internal flooding.

The 'smart sewer' project is revolutionary and will allow us to make changes to the flow and direction of wastewater (which contains a diluted mix of sewage, rainwater, run-off from roads and fields, and water from sinks, showers and appliances) moving

it around the sewer network, and making spills less likely to happen.

Using a mix of AI technology and hundreds of smart sensors placed along sewer pipes, it will predict when and where rain is about to hit in the region and when and where the sewer networks are more likely to reach capacity and spill.

It will then automatically balance the flows of the network, diverting this wastewater to the emptier parts of the network, managing capacity and reducing the likelihood of spills taking place. The technology will also identify areas where additional capacity is needed, allowing further targeted investments to be made to build alternative storage for rainwater where it is needed most.

This real-time decision support system will be powered by a digital twin – which is a digital version of the physical sewer network which runs ahead of time and gives us more control over the system and the chance to make changes before spills happen.

The "smart sewer" will be carried out in partnership with HydroDigital, and will help to reduce the impact of storm overflows on the region's rivers and keep the high standards of the region's bathing waters – with 32 of the region's 34 bathing water currently meeting Defra's top two standards of Excellent and Good.

Nigel Watson, Information Services Director at Northumbrian Water, said:

“This is an exciting and really innovative project which is set to completely revolutionise the way that our network operates, and maybe even how our industry works as a whole.

“We are determined to be at the forefront when it comes to using clever new technology to protect our rivers and coasts as much as possible. This could be a massive step for us towards reducing how we use storm overflows and is set to be a huge step forward in protecting our environment, whilst continuing to protect homes and businesses from flooding.”

Luis Montestruque, Principal at HydroDigital, added:

“With two decades of exclusive experience building smart sewer systems, we're proud to partner with Northumbrian Water on this ground-breaking project.

“This initiative is pioneering in its use of AI for design, advanced hybrid digital twin technology, innovative stress avoidance routing control, and use of probabilistic weather forecasting. It stands out for its large number of sensors and globally coordinated control points and one of the most aggressive implementation timelines in the industry.

“This project will set a global standard in how water companies use smart sewer technology to reduce spills at a fraction of the cost and time needed by traditional engineering solutions.”

6.4 Green energy expansion

A high-tech test facility that uses heat to capture ammonia from sewage, ready to turn into green fuels, is now up and running in the North East. We have taken delivery of a purpose-built advanced ammonia stripper and recovery system – a small-scale treatment plant which would be trialled at our existing Howdon Sewage Treatment Works in North Tyneside.

The project, in partnership with environmental technology company, Organics Group, would see thermal energy strip and recover the ammonia from wastewater – the first time in the world that a water company has ever recovered ammonia using a thermal technique in this way. The recovered ammonia product can then be used to generate fertiliser products and green fuels that may be used in the emerging hydrogen economy.

Since the ground-breaking piece of kit arrived in the UK, work has been ongoing to get it up and running, and a testing programme is now in full swing, with the facility already recovering 95% of a high strength ammonia product. Ammonia is present in wastewater through the natural breakdown of proteins and is a building-block used widely in the production of valuable chemicals, such as pharmaceuticals, fertiliser products and green fuels.

Removing ammonia will also have a number of benefits for our wastewater treatment process, making it more efficient by reducing overall energy demand, reducing greenhouse gas emissions and ultimately helping to keep customer bills as low as possible. By minimising emissions from the biological treatment process, it will also help to accelerate our ambitious net zero goals.

Angela MacOscar, Head of Innovation, said:

“ **As a business we have been supporting a circular economy for many years by generating renewable energy, recycling sludge to land and maintaining a healthy water cycle. This is the next stage of our continual journey to maximise our resource efficiency.**”

The idea to develop a thermal ammonia stripper plant at Howdon first won a £225,000 funding bid from water regulators, Ofwat, back in 2021.



6.5 Collaborative conservation in County Durham

We're working with Wear Rivers Trust to help protect the Hummer Beck and River Gaunless in County Durham. The team delivering our £4.3m project to upgrade our New Moors Sewage Treatment Works (STW), near Evenwood Gate, County Durham, have provided more than £14,000 of funding to WRT's Hummer Beck and Lower Gaunless Project, near Bishop Auckland.

The project aims to support ecological improvements in the two watercourses, complementing our New Moors upgrades, which will improve the quality of treated water returned to the environment via the Hummer Beck.

This Bluespaces funding will support improvements to 4.3km of accessible environments along and by the watercourses.

The Wear Rivers Trust project is also supported by Let's Clean Up Bishop Auckland, Gaunless Gateway – Big Local, Bishop Auckland Area Action Partnership, Catchment Sensitive Farming (part of Natural England and the Environment Agency).





RELIABLE SERVICES

7.1 Enhancing customer service efficiency

7.2 No-dig: revolutionising water pipe repairs

7.3 Accelerated water resilience investment in Essex & Suffolk

7.4 £10m upgrade to water supply

7.5 Bin the Wipe hits an impressive milestone

Reliable services

Our business is inherently long-term with assets we expect to operate for more than 100 years. We have an enduring presence in the communities we serve and provide services to generations of our customers.

We are proud to provide an essential service for our communities. Our customers rely on us, and we recognise the significant responsibility this entails—to keep water flowing and toilets flushing. We work diligently to enhance the reliability of our network, focusing our investments and innovations where they are needed most.

Our commitment encompasses both the water and wastewater aspects of our business. For water, we measure the level of interruptions to customers’ supply, leakage, and how well we manage risks to drinking water quality. For wastewater, we focus on sewer flooding, understanding that it represents one of the worst service failures our customers can experience.

Water services

We continued to reduce leakage overall, beating our target in Essex and Suffolk and missing it by the narrowest of margins in the north.

We’re disappointed to have not hit our high standards in water quality (despite scoring highly in our customer-facing measures of taste, odour and discoloration), although we improved our performance significantly from the previous year. We remain committed to achieving industry-leading levels of Compliance Risk Index (CRI), which is a water quality compliance measure, and are working closely with the DWI on this.

Our overall performance on interruptions to supply was impacted by a single, significant incident in Walpole, Suffolk, in January 2024. Prior to this, our performance for the year was substantially better than target.

Going forward, we are committed to placing our customers at the centre of our response to a supply interruption. Our focus is to restore customers’ supplies before carrying out any permanent repair, while considering environmental protection and the health and safety of our team and the public.

We restore supplies by re-zoning our network or deploying temporary equipment, such as our mobile storage units (MOWBIs), described our [2022/23 report](#). Longer term, our performance against this metric remains susceptible to the weather events, with storms or flooding events expected to increase in frequency due to climate change; these can disrupt the operation of our assets, particularly if they affect power supplies.

We have continued our efforts to help our customers reduce their demand for water. We have a long-term goal to reduce household per capita consumption (PCC) to 118 litres per person per day by 2040, from a base of 150.6 litres per person per day.

However, the Covid-19 pandemic has had a pronounced and sustained effect on PCC. During the pandemic, household consumption increased due to lockdown periods and working from home. This situation has taken time to reverse, as people gradually returned to the workplace, only stabilising during the second half of 2023/24.



Sewer flooding

For the first time, in 2023/24 we achieved our PC on all three measures of sewer flooding (internal, external and repeat) and achieved our stretching internal targets. This level of performance was delivered despite the year being much wetter, with annual rainfall up by c.50% on the previous year. We also saw significantly more named storms impacting our regions, so experienced more heavy periods of severe rainfall compared to 2022/23. We have now reduced the number of internal sewer flooding incidents reported by more than 65% since 2019/20.

This success has resulted from the continuing maturity of our sewer flooding tactical plan initiated in 2019. This has included the Bin the Wipe campaign through which we have now directly reached over 235,000 households with our operational activities and have contacted a further 600,000 with targeted letters in hotspot locations.

We also boosted our resources in our dedicated Fats, Oils and Grease team, which works closely with both commercial and domestic customers to advise best practice for managing these substances.

In 2023/24 we started conducting CCTV for all blockages that occur on the network. This helps us to effectively and efficiently investigate and rectify any defects which could lead to future blockages or flooding from our network. We reduced both the number of sewer blockages and sewer collapses in 2023/24.

Looking ahead, the modelling work we used to support our Drainage Water Management Plan (DWMP) will help us significantly reduce the percentage of properties we identify as being at risk of flooding. We also have plans for significant investment to improve the capacity of our network and will see wider benefits from our Storm Overflow Reduction Plan, which will improve the resilience of our network and further reduce flood risk. Our Long Term Delivery Strategy outlines our commitment to further reduce flood risk by 60% by 2050.

Reliable services			
Measures	2021/22	2022/23	2023/24
Interruptions to supply greater than three hours	05:51 minutes	08:16 minutes	05:30 minutes
Internal sewer flooding	1.84	1.21	1.22
Leakage	NW - 0.1% reduction to 134.7 MI/d	NW - 3.7% reduction to 129.8 MI/d	NW -10.1% reduction to 121.2 MI/d
	ESW - 3.2% reduction to 63.1 MI/d	ESW - 7.5% reduction to 60.3 MI/d	ESW - 16.3% reduction to 54.6 MI/d
Compliance risk index (CRI)	6.36	7.62	3.45

reduced the number of internal sewer flooding incidents we report by more than

65%
since 2019/20

7.1 Enhancing customer service efficiency

In early 2023, we identified a significant issue: nearly 30% of field jobs dispatched for blockage and flooding incidents were unnecessary, often stemming from private property issues beyond our responsibility. This inefficiency not only incurred avoidable costs but also strained customer relations.

To address this challenge, we redefined our approach to customer conversations, focusing on value-driven interactions. Recognising the potential for customer disappointment, we set an ambitious goal of reducing unnecessary jobs by 30% while maintaining our exceptional customer satisfaction (C-MeX) scores.

We adopted new practices, including daily huddle catch-ups, learning teams and coaching. Through group coaching sessions and ongoing support, advisors gained knowledge and confidence in navigating such conversations. This approach was embedded into our training process, ensuring all new team members were equipped with the necessary skills.

To measure progress, a Power BI dashboard (a business analytics service that lets you view data and share information) was implemented, providing real-time performance insights. The results were outstanding: over £100,000 saved to date, surpassing the original target, and a reduction of almost 16% of unnecessary callouts for blockages and 14% for external flooding.

Simon Cyhanko, Head of Wastewater Networks, praised the initiative for

“ **Its significant cost savings and collaborative approach. The implementation of ‘better validation’ principles not only reduced unnecessary costs but also exemplified our commitment to learning and teamwork.**”



7.2 No-Dig: revolutionising water pipe repairs

Originating as an idea at our Innovation Festival in 2021, No-Dig emerged as a groundbreaking solution to water pipe leaks. Developed alongside Origin Tech, it underwent rigorous testing throughout 2023/24, including live trials on various pipe diameters and materials. These trials proved its effectiveness in repairing leaks swiftly and efficiently and more than 1000 successful repairs have since been carried out.

No-Dig stands out in the industry for its simplicity, ease of use, and environmental benefits. Unlike traditional methods, it requires no excavation, minimising disruption to customers and reducing carbon emissions. The all-natural, food-grade materials used ensure safety for water sources. Its adaptation from technologies used in other industries showcases our innovative thinking in addressing leakage issues, whilst meeting regulatory standards and ensuring water quality.

The adoption of No-Dig has yielded significant benefits: enhanced customer satisfaction by reducing disruptions and maintaining water supply continuity; cost savings through decreased traffic management expenses; and the safety of our maintenance teams is improved by eliminating risks associated with traditional digging methods.

We are proud that having proven this innovation at Northumbrian Water, trials are now underway across the industry.

The work done by our team and Origin Tech was recognised at the Water Industry Awards in June 2024 as 'Leakage Initiative of the Year'.



7.3 Accelerated water resilience investment in Essex & Suffolk

Four projects that will help maintain secure supplies of water to 1.8m people across Essex and Suffolk have been given a funding boost that will enable work to start sooner than planned.

Accelerated funding of £48m will allow us to bring forward the start of vital works to boost the resilience of the water network in the region.

Rather than starting work on the projects in 2025, the funding has allowed it to begin in 2024, with a potential for up to £22.72m to be spent by the end of March 2025. The investment includes:

- £12.74m on a new water treatment works and borehole in Linford, Essex, which will add an extra seven million litres of capacity into the local water network.
- Detailed engineering designs for the £12.49m Suffolk Strategic Network and Storage Enhancement Schemes. This work will lead to the construction of two new strategic pipelines in Suffolk, which will allow surplus water to be transferred more easily around the county to the areas that need it.

- Detailed design of the £15.08m North Suffolk Winter Storage Reservoir, which would further add resilience to Suffolk’s water supplies.
- Detailed design of the £7.79m Lowestoft Reuse scheme.

The storage reservoir and reuse schemes have the potential to work alongside the Suffolk Strategic Network and Storage Enhancement Schemes to add further resilience to supplies for customers in Suffolk.

Kieran Ingram, our Water Director, said:

“**The challenges we face in Essex and Suffolk as a result of the dry weather and changing climate are recognised by this decision. These investments will support the tireless efforts of our team to keep the water flowing for all of our customers, all day, every day.**

“**This funding will allow us to do more, faster, and that’s great for our customers and our region.**”

Our Project Manager, Lowri Robbins said:

“**This collection of works represents a significant investment in Water Treatment Works, that will deliver clean, clear and great tasting water for our customers, now and into the future, as well as environmental benefits.**”



7.4 £10m upgrade to water supply

We are investing £10m in upgrades at a water treatment works that will help improve resilience and quality of the water supply to large parts of the North East. Mosswood WTW, in County Durham, supports the supply of water to more than 800,000 customers across County Durham, South Tyneside, Washington, and parts of Sunderland and North Tyneside. Work includes the installation of 12 innovative ultraviolet units that will support long-term water quality improvements.

The system was trialed at Mosswood as an industry-first and has also been implemented at Lumley Water Treatment Works, near Chester-le-Street. Alongside this, the treatment process will benefit from upgrades to the site's power systems and the addition of two new chemical storage tanks, designed and installed in a way that can enable further upgrades to be delivered more efficiently.

While the majority of these pieces of work have now been completed, an additional project to construct a lagoon on site to store and manage process water is expected to be continue until Spring 2024. This allows partially treated water to be held on site, in the case of an issue with the treatment process, helping to protect the environment.

Project Manager, Lowri Robbins said:

“ **This collection of works represents a significant investment in Mosswood Water Treatment Works, that will deliver clean, clear and great tasting water for our customers, now and into the future, as well as environmental benefits.**”



7.5 Bin the Wipe hits an impressive milestone

Our award-winning ‘Bin The Wipe’ team have now pulled one tonne of wipes out the North East sewer network which equates to over 200,000 unflushable wipes! The milestone comes three years after the project was launched in 2020 when it was found that 64% of the 15,600 sewer blockages cleared in the North East were caused by wet wipes. At the time of the launch, an ambitious target of reducing blockages by 40% was set. The results show this target is being exceeded year on year in the ‘hot spot’ areas.

Most recently, teams working in North Tyneside saw a 79% reduction in wipes in the hotspot areas and in Washington a 77% reduction was achieved when intervention work was carried out. Since the launch, the teams have reached over 433,000 households, and following a visit, the number of wipes in the network have reduced in the ‘hot spot’ areas by up to 91%. This reduces the chance, and cost of flooding into customers’ homes, as well as having positive impacts on the local environment.

Simon Cyhanko, Head of Wastewater Networks said:

“ **It shows the dedication and professionalism of our Sewerage Maintenance Operatives who are working tirelessly day in and day out to clear our network. By helping people to understand the problems caused by flushing wipes, and the potentially awful consequences, it really opens people’s eyes and inspires change.**”

The success of the project and the support it has generated from customers, regulators, and stakeholders, including members of parliament, has led to it being adopted by the water and wastewater industry, and the industry body, WaterUK. This has resulted in a national ‘Bin the Wipe campaign’ which was launched in 2023.





AFFORDABLE SERVICES

- 8.1 Streamlining low-income tariff applications
- 8.2 Data sharing with DWP
- 8.3 Water saving visits customer feedback

Affordable services

We have an ambitious target to eradicate water poverty in our operational areas. Customers in water poverty are those paying more than 3% of their net household income, after housing costs, on their water bill. Although we have made some progress towards this target, the significant economic upheaval over the past three years, with Brexit, the Covid-19 pandemic and cost-of-living crisis, coupled with high inflation driving rising bills, has made this ambition much more difficult to realise.

We have seen an increase in customers reaching out for financial support through payment arrangements and lower bills. During 2023/24, the number of customers benefitting from either a reduced or capped bill tariff increased by 25% to over 131,000. This resulted from a number of proactive steps we took.

We expanded the eligibility criteria for our low-income tariff by increasing the income cap by over 40%.

Also, to reduce customer effort when applying for support, we developed a unique income verification tool which assesses income at a household level in one transaction, providing confidence that the discounts are being given to those most in need and providing customers with an instant decision of eligibility.

Our data sharing arrangement with the Department for Work and Pensions (DWP) continued to provide the largest opportunity to provide reduced bills for customers and we successfully set up data sharing agreements with six councils to share customer data using the Digital Economy Act.

In 2023/24 the BS 19477: Inclusive Service Verification was replaced with an enhanced Kitemark standard. The new standard is internationally recognised ISO 22458 and continues to assess whether inclusive services are fully accessible to all customers and whether companies have the right business processes in place to support all customers. This is the fourth year that we have used the standard to audit our approach to vulnerability to ensure our services are inclusive for all.

Looking ahead, we are exploring innovative tariffs that could help customers save money, such as reducing standing charges where they use less water. Our customer subsidy is one of the lowest in the industry, which makes funding our support arrangements challenging. We have customer support to increase the contribution from April 2024, which will provide opportunities to expand the schemes and support more customers in the future.

Affordable services

Accreditations

BSI for Inclusive Services – this has now been replaced with ISO 22458

Measures	2021/22	2022/23	2023/24
Satisfaction of customers who receive additional financial support	9.2	9.2	8.9
Percentage of households in water poverty	9.61%	15.27%	14.01%
Customer perception of value for money	8.2	8.2	7.9%

Inclusive Service Verification

has been replaced with an enhanced Kitemark standard. The new standard is internationally recognised ISO 22458

25% increase

in customers receiving reduced or capped bill tariff to over 131,000

Expanded the eligibility criteria for our low-income tariff by increasing the income cap by over

40%

8.1 Streamlining low-income tariff applications

We have developed an income verification tool to streamline the application process for our Low-Income Tariff. Since its expansion in February 2024, we've encouraged customers to use this service hosted on their online accounts, eliminating the need to send in proof of income.

This initiative brings benefits for both customers and the business, from increased registrations for online accounts to instant decisions for ineligible customers.

The tool reduces customer effort, as only income amounts for all property occupiers need to be input. It also gives online account access to bill values, enabling instant verification and discount calculation.

Batch processing of successful applications leads to operational savings, compared to manual eligibility checks.

Since February 2024, we've processed 1,985 applications using the TransUnion income check, automatically accepting 799 of those. For cases where income verification fails, we request proof of income. Our analysis reveals that customers often omit income details, prompting us to refine web functionality and messaging to enhance accuracy and reduce application rejections.

We are committed to being efficient and using customer-centric innovation to simplify tariff applications.



8.2 Data sharing with DWP

We have been successfully sharing data with DWP to identify customers eligible for our Low Income Pensioner Discount since 2021. To check eligibility with DWP, we must provide a customer's full name and date of birth, which we do not have for customers who pay their water charges to a council, that collect on our behalf, so they were missing out.

We now have data sharing agreements with councils to allow this information to be shared, and councils send us details of all their occupiers who are of pensionable age.

So far, this has been completed with Gentoo Housing Association, Believe Housing, Karbon Homes, Barking and Dagenham and North Tyneside Council. The success of these data sharing exercises has been shared between councils as a positive way to support their tenants.

We have now added over 28,000 customers to our Low Income Pensioner Discount through data sharing with DWP.



8.3 Water saving visits customer feedback

We pride ourselves on delivering exceptional water efficiency home visits, aimed at empowering customers to save water and reduce their environmental impact. Here are four quotes from satisfied customers highlighting the excellence of our plumbers:

“ I have just had a water saving home check. Brilliant. If you had a post about these visits, I would share on local Facebook groups as the water savings he has made me are primarily good for the environment and secondly for my water bills. Would happily recommend.”

“ This was an excellent visit, and a model for effective customer engagement. John was very well informed and gave us the tailored advice we needed. A very good visit.”

“ Harry was an excellent ambassador for the project, not too sure it could be improved!”

“ Liam was very personable and a knowledgeable young man. Make sure all your home visit plumbers are like Liam.”





EFFICIENCY AND PRUDENT INVESTMENT

- 9.1 Introducing the Living Water Enterprise

- 9.2 New graduate programme aims to build careers

- 9.3 Upgrades to water for more than 1 million customers in Essex

Efficiency and prudent investment

We have long-term plans to ensure the sustainable operation of our business, and we manage our finances to maintain stability and soundness. Maintaining a fair balance between our customers and investors is crucial. This approach helps keep our customers' bills as low as possible while attracting the necessary capital to finance investments that maintain and enhance our assets. Striking this balance builds trust and confidence among our customers.

Over the past year we have embraced the challenges of an ever-evolving business landscape and the issues facing our industry and formulated strategies that position us to improve standards further, deliver leadership and show support for our regions and communities.

In 2023/24 we invested approximately £330 million in our assets. Our investments focused on delivering environmental improvements, enhancing the resilience of our water and wastewater assets, improving cyber resilience, and expanding our smart metering capabilities.

We are committed to maintaining an investment grade credit rating, as assessed by independent credit rating agencies Moody's and Fitch.

Innovation

We have continued to focus on driving value from innovation at speed and scale. We actively encourage employees to come forward with innovative ideas and support their development via our Invest Quest competition.

Our innovation pipeline has 81 ideas being considered. During the year, we progressed transformational ideas such as: the Tipping Point asset health tool that aims to extend the life of concrete assets; the Water Cookbook that aims to reduce the cost of civil design projects by 3%; and the Smart Sewer project to optimise the use of storm overflows. We are enabling the scaling up of delivered innovation projects including No Dig pipe fix technology, National Underground Asset Register and Pressure Vessel, which reduces interruptions to supply.

These are a few examples of how innovation at NWL is really making a difference to our customers, now and for a more resilient future.

We have fully engaged with Ofwat's Innovation Competitions and we have built up significant internal capability and have submitted the highest number of bids into this competition. This is also driving higher levels of collaboration across the water sector and beyond as we seek out new and interesting partnerships for future rounds.

During 2023/24 there was another round of the Ofwat Innovation Fund, Breakthrough 4, and we were active in both the Catalyst and Transform rounds. We were successful in four of our six bids:

- River Deep Mountain AI - to develop open-source, scalable, digital models, using machine learning, to unlock new insights into the complex factors impacting water bodies and to inform effective action to tackle pollution.
- Support4All phase 2 - a national, secure, cross-sector platform sharing Priority Services Register and other vulnerability data between water, energy, and telecoms organisations, supporting a 'tell-us-once' approach.

- METREAU - this will ready Microbial Electrolysis Cells for scaled use in wastewater utilities to support against capacity pressures, reduce energy needs and carbon footprint and recover resources of economic value.
- Pipebot patrol - to develop an autonomous sewer robot that lives in the sewer, constantly inspecting and raising alerts to the precise location of blockages as they begin to form, allowing maintenance teams to react before sewer flooding occurs.

In total, we have now been awarded funding of £29m from the Innovation Fund in respect of 16 projects.

In previous years of the funding programme we secured funding for 12 projects, which are progressing. The Organics Green Ammonia project, which turns ammonia into green hydrogen fuel, was successfully completed and we are now looking into scaling this idea. The National Leakage Research and Test Centre is an ambitious leakage test centre for the sector and is in the design phase. Phase one work on Stream, a transformational open data platform, has completed and funding secured to scale its use.

Efficient and prudent investment			
Measures	2021/22	2022/23	2023/24
Expenditure versus allowance	+1.3%	+2.5%	2.5%
Credit rating	Moodys (Baa1) and S&P (BBB+ negative outlook)	Moodys (Baa1) and S&P (BBB stable outlook)	Moody's (Baa1) (Stable) and Fitch (BBB+)

£29 million

from Ofwat's Innovation Fund for 16 projects

£330 million

investment in our assets during the year



9.1 Introducing the Living Water Enterprise... Our largest ever package of framework agreements

The Living Water Enterprise (LWE) marks a significant milestone in our journey towards transformative investment and sustainable development. With the addition of seven new partners, LWE has expanded its network of collaborators, forming an industry-leading collaborative partnership that lies at the heart of our plan for transformational investment and change.

Embodying our commitment to local communities, the LWE is founded on the principles of economic sustainability and community engagement. By partnering with local businesses such as Esh-Stantec and Avoe Limited, we not only stimulate regional economies but also foster a sense of ownership and pride within the communities we serve.

Environmental stewardship lies at the core of the LWE's mission. Through innovative approaches to infrastructure design and construction, including nature-based solutions championed by partners like Farrans Construction and Mott MacDonald Bentley, we aim to minimise our environmental impact while delivering resilient, future-proof solutions.

Central to the success of the LWE, which will play a key role in our PR24 Business Plan, is a culture of efficiency and innovation. Leveraging the collective expertise of our partners, we are trialling new approaches to asset management and delivery that will consider the complete lifecycle of assets, ensuring that projects are completed on time and within budget.

Alongside this total expenditure (TOTEX) approach, the group will challenge existing methods and investment choices, allowing for a greater focus on alternative options, including the potential to reduce carbon through nature-based solutions to water and wastewater treatment.

Monisha Gower, our Asset Management Director, underscores the significance of the LWE in shaping our future trajectory.

“ **These partnerships aren't just about building infrastructure.**”

“They're about building legacies, both for our communities and for future generations. By working together, we can create a brighter, more sustainable future for all.”



9.2 New Graduate programme aims to build careers

As we prepare for a period of unprecedented growth and investment, the launch of our new graduate programme signalled a commitment to cultivating talent and driving sustainable development. With eight exciting new positions available within the Assets Directorate, the programme offers graduates a unique opportunity to kick-start their careers and contribute to meaningful projects that impact millions of lives.

Designed to provide a comprehensive learning experience, the programme offers structured training and mentorship from seasoned professionals within our diverse teams. Graduates will have the opportunity to work on a wide range of projects, gaining exposure to various aspects of asset management and infrastructure development.

Monisha Gower, our Assets Director, emphasises the importance of the graduate programme in shaping the company's future workforce:

“ **This programme is not just about recruiting talent,” she explains.**

“It’s about investing in the future leaders of our industry and empowering them to drive positive change. By providing graduates with the skills and knowledge they need to succeed, we’re building a more resilient, sustainable future for our communities.”



9.3 Upgrades to water for more than 1 million customers in Essex

We've doubled the capacity of our washwater facility at Hanningfield water treatment works (WTW) by completing a £14m project that will enhance the resilience and quality of drinking water for more than a million people across Essex.

The investment has seen the installation of two new 1.25 Megalitre tanks, and a new pumping station to support the additional water flows. The washwater facility takes water that has been used for cleaning the site's filters, so that it is not sent straight back into the environment.

Once it has been given time to settle, samples are taken. The cleanest water is returned to Hanningfield Reservoir, and the remaining sludge goes into the site's innovative reed bed facility.

These reed beds are a first, giving a sustainable solution to handling water treatment sludge, saving 70 tonnes of CO2 emissions a year, compared with the traditional system. They provide a natural method of dealing with the sludge, recycling the water back into the reservoir for re-use and removing the need for mechanical or chemical processes, along with the associated maintenance, labour and power.

George Mok, our Project Manager, said:

“ This has been a project that has required great teamwork from across our business, from colleagues in Operations, to Regulation, to Conservation, as well as with the team at Farrans & TES, and we are really pleased that the newly expanded facility is now in action.”

Steve Haviland, Contracts Manager for Farrans Construction, said:

“ There have been a number of excellent innovations in the water sector in recent years which will have a significant impact on the environmental sustainability of washwater facilities in the future and we are proud to have been involved in this one at Hanningfield.

“The new treatment works are built for the future, with capacity and conservation at the heart of the design. The project was an excellent example of collaboration throughout from design to commissioning.”



10.

SUSTAINABILITY AND RESILIENCE

10.1 Smart roll-out

10.2 People development

10.3 Resilience and response strategies

Sustainability and resilience

For us, sustainability and resilience mean two things: having sustainable and resilient infrastructure and a sustainable and resilient organisation.

To assess the immediate resilience of our assets, we monitor measures such as repairs needed to water mains, sewer collapses, and instances of unexpected shutdowns at our water treatment works due to faults. For long-term resilience, we evaluate the risk of severe water restrictions during a drought and sewer flooding during a storm.

Regarding the wider organisation, we measure the 'Trust Index' produced by Great Place To Work UK to gauge the sustainability of our workforce, recognising that our people are crucial to delivering services to our customers.

For our network, in the past year we met our targets on unplanned outages, mains repairs, risk of sewer flooding, and on sewer collapses - where we've reduced the number reported by 50% since 2019/20.

Our PR19 WRMP demonstrated that we have 100% security of supply in all our Water Resource Zones, across the full 40-year planning horizon. We also demonstrated resilience to drought with a return period of 1 in 200 years in all our Water Resource Zones, with 0% of our customers at risk from severe supply restrictions.

Having a resilient workforce that is equipped with the knowledge, training and tools to carry out the work we need them to do is essential but it is just as important to have a team that enjoys their work and is proud to work for our organisation. In November 2023, we participated in the Great Place to Work survey, inviting all colleagues to share their views. 88% of colleagues provided their feedback, with 81% agreeing that Northumbrian Water is a great place to work. Feedback scores increased across all areas of colleague experience and our Trust Index score improved from 70% to 77%, with the organisation being ranked in the top 40 super large UK employers.

Sustainability and resilience			
Measures	2021/22	2022/23	2023/24
GPTW Trust Index	67%	70%	77%
Mains repairs	110.9	154.9	109.7
Unplanned outages	4.57%	3.40%	2.93%



10.1 Smart roll-out

We are delighted to have announced our strategic collaboration with Connexin, a leader in smart infrastructure solutions. This partnership marks a significant milestone in ensuring all water meters are smart throughout the Essex and Suffolk supply regions by 2035.

The largest UK water metering contract with Connexin will result in tangible benefits for consumers and contribute to our overarching goals of sustainability and efficiency within the regulatory framework.

Smart water meters measure how much water is used by a household, and then send automatic readings to the water provider.

Over the next 11 years and beyond, Connexin will provide a wireless communications network that will serve up to a million households and businesses. This network will enable remote access to hourly water meter readings, enhancing the visibility of usage and empowering customers to manage their bills more effectively.

This will also help us to identify and reduce household leakage across our Essex and Suffolk area, and in turn, reduce the amount of water wasted across some of the country's most water-stressed regions.

Gary Adams, Head of the Smart Transformation Programme, said:

“We are excited to bring their extensive knowledge and experience into our programme of work. We’re passionate about the environment and our targets to reduce both consumption and leakage, creating a more water-efficient system for our customers.

“We know that approximately 18% of our domestic customers have a leak at their property which has a direct impact on the value of their bill.

“Through this smart connectivity, we will be able to detect customer side leakage more precisely and quicker than before supporting our customers in keeping their bills as low as possible and provide valuable insight in shaping how the industry can better understand where water is used.”

Connexin has been awarded a contract of up to 15 years to provide the infrastructure; five years initially with the option to extend for a further 10 years.



10.2 People development

By investing in the development of leaders and managers, we're not only enhancing their leadership practices but also contributing to the creation of high-performing teams.

This focus on continuous learning and improvement is key to fostering a positive work environment and achieving our organisational success.

We offer a variety of resources - such as a management induction programme, leadership masterclass series and management coaching - which demonstrates a commitment to ensuring our leaders have the tools they need to succeed. The recognition that everyone's needs are different is crucial, and our blended development offer reflects this. Our personalised approach both supports individual growth and contributes to building a culture where everyone feels valued and supported in their professional development journey.

Our Aspiring Managers Programme is a structured development journey for colleagues who are considering their first people management role. It's a six month programme that develops a broad range of knowledge, skills and experience expected of people managers, with real-life opportunities to put into practice the skills covered in the sessions.

Feedback told us that this programme has helped individual confidence in personal career progression.



10.3 Resilience and response strategies

In the face of unforeseen challenges such as global pandemics, major storms, and energy supply disruptions, our commitment to customer support and employee safety remains steadfast.

Priority is given to servicing our Priority Service Register customers, hospitals, and care homes, while collaborating with retailers to facilitate the safe operation or necessary closure of local businesses.

Beyond an incident itself, our focus lies on the well-being of individuals throughout and after the event. We work hard to make sure our customers and the communities we serve feel informed, supported, and cared for at every stage, with a visible presence where appropriate. We conduct post-incident debrief sessions to analyse successes and areas for improvement, especially in the context of significant regional or national incidents.

Collaboration extends to local agencies, resilience forums, support bodies, and industry counterparts within Water UK. Insight revealed that our non-operational staff can contribute meaningfully during operational incidents, thereby freeing up operational resources for problem resolution.

To formalise this insight, we established a structured process for employees across the company to volunteer for various roles, including engagement with the Business Continuity Team, participation in exercises to validate plans, involvement in incident teams.

The contribution of these volunteers spans a diverse range of tasks, such as managing bottled water stations, coordinating volunteers, data analysis, call handling, customer liaison, social media management, and traffic coordination. Not only does this help us to deliver unrivalled customer experiences, it also enriches the skillset of our workforce and fosters continuous learning.





OUR PERFORMANCE

Measures at a glance

Overall statement

Accreditations

Ethisphere

Good Business Charter

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Independent Trust score	8.8	8.7	8.6	8.2	8.8	We survey our customers to ask them if they think we are a company they can trust.	<p>We are disappointed to note a further decline in agreement with these statements and an increase in customers who are undecided. In the coming months, we will focus on enhancing our communication with customers about the aspects of our Purpose that are most important to them.</p> <p>Although we are pleased to be rated the most trusted water company in England, we are committed to driving up standards further.</p>

Purpose statement tracking in Omnibus survey

Cares for the essential needs of its communities and environment, now and for generations to come.	-	68%	61%	58%	69%	We survey our customers to ask if they think we live up to our Purpose, by asking to what extent do you agree or disagree with each of these statements.	We are disappointed in the decrease in peoples opinion against the first and third part of our purpose statement. As with trust, people’s opinions on the water industry in 2023 have further declined and this is linked closely to public concerns about the environment and the tone of associated political commentary and media coverage in relation to the water sector.
Provide reliable and affordable water [NW: and wastewater] services for its customers.	-	73%	66%	68%	74%		
Make a positive difference by operating efficiently and investing prudently, to maintain a sustainable and resilient business.	-	62%	53%	50%	63%		

Caring for our communities

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
C-MeX	3rd - 85.76	2nd - 84.46	1st - 83.74	3rd - 81.40	Top 2	Our regulator Ofwat's customer measure of experience, based on surveys of customers about their satisfaction and experience	We are encouraged to have achieved third place in the industry for C-MeX, however having been placed first in 2022/23, we are determined to improve further in 2024/25, reflecting our long-standing commitment to delivering unrivalled customer experience. We continue to score highly in this area in CCW's 'Water Matters' report, with NWL being placed first for overall experience and overall satisfaction.
Local procurement spending (and impact)	58%	60.34%	62.60%	61.74%	60%	We aim to spend at least 60p in every £1 with suppliers in our operating regions	As one of the largest businesses in the regions where we operate, and in keeping with our commitment to our communities, we believe it is important to maximise the positive impact of our spending. We therefore prioritise working with a supply chain that upholds our social, economic, and environmental standards and shares our vision of continuous improvement.

Caring for our environment

Accreditations

ISO 14001 Environmental management - achieved

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Environmental Performance Assessment (EPA) star rating	4 star	4 star	3 star	3 star	4 star	The Environment Agency, one of our regulators, collects data on how well water companies have protected the environment in a number of different ways. They use the data to form a scorecard and give an overall assessment each year out of four stars.	Our 2023 environmental performance has continued to attain three-star “good” status in the Environment Agency’s assessment, published on 23 July 2024, and we are pleased to have been rated as 100% in a number of measures – including in our WINEP (Water Industry National Environment Programme) targets, in our treatment of sludge and also in our supply and demand standards.
Net greenhouse gas emissions (reduction against 2019/20 baseline)	15,235	46,296	23,445	49,307	6,771	Net zero is about balancing the amount of harmful greenhouse gases being put into the atmosphere with those being taken out.	This year, and in accordance with ISO-14064-1 we have reduced our operational emissions to just 19.3 thousand tonnes of CO2e. This is a modest improvement compared to last year. Examples of how we have reduced emissions by: <ul style="list-style-type: none"> • Installing our first large scale solar arrays across 6 sites including our 9MW solar array at Broken Scar which was commissioned this year, and • Being the first and are the only water company to use 100% of our sewage sludge to create energy (or power from poo), and we’ve enhanced our activities in energy creation further with the implementation our second Gas to Grid plant at Bran Sands.

Caring for our environment

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Pollution incidents per 10,000km sewers	14.61	22.98	19.98	32.97	23.00	The number of times pollution is caused by contaminated substances being released from our sewers into a watercourse or onto land, per 10,000km of sewer.	For 2023, our performance for category 1-3 wastewater pollution incidents deteriorated to with 99 incidents (32.97 against our PC of 22.40 incidents per 10,000km of sewer served). Power issues continue to be one of the main reasons behind the increase in category 3 incidents which primarily impact our sewage pumping stations (SPS) where power cuts or very small interruptions, known as 'brown-outs', cause significant issues. We continue to put in place interventions to increase our power resilience, such as improved arrangements for generators, engagement with our power Distribution Network Operator (DNO) to address risks and resilience investment in our PR24 Business Plan.
Water Environment Improvements	30.2km	34.6km	33.1km	45.6km	10km	The amount of improvements made to water environments such as rivers, reservoirs and coastlines that the public can access. Improvements could be made to facilities and recreation, wildlife and biodiversity and the quality of water.	Power issues continue to be one of the main reasons behind the increase in category 3 incidents which primarily impact our sewage pumping stations (SPS) where power cuts or very small interruptions, known as 'brown-outs', cause significant issues. We continue to put in place interventions to increase our power resilience, such as improved arrangements for generators, engagement with our power Distribution Network Operator (DNO) to address risks and resilience investment in our PR24 Business Plan.

Caring for our environment

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Bathing water quality	33/34	33/34	33/34	32/34	33/34	The Environment Agency, one of our regulators, monitors how clean the water at designated beaches is. Every year they give the water at each designated bathing water a rating of excellent, good, sufficient or poor.	While our Bathing Water Quality overall remains strong, we have seen a deterioration at 1 site – Seaham Hall. Despite the fact that there is no evidence that our assets are causing the issue, this is sufficient for us to fail our extremely stringent PC and we continue to investigate further.
Per capita consumption (PCC)	3.8% Increase to 156.3 litres	4.7% increase to 157.7 litres	5.6% increase to 159.1 litres	2.5% increase to 154.4 l/p/d.	4.1% decrease to 146.2 litres	The amount of water each person uses, on average, each day.	Our PCC commitment for 2023/24 is 152.5 l/hd/d. This represents a 0.8% reduction from 2022/23 and a 7.9% reduction since 2020/21. However, annual PCC is still 1.3% higher than the target base year (3 year average). The three-year average PCC, which is 154.7 l/hd/d in 2023/24 remains inflated by the material and sustained impact of the Covid-19 pandemic. We expect this to reduce as the three-year rolling average moves forward.

Reliable services							
Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Interruptions to supply greater than three hours	04:04	05:51	08:16	05:30	05:23	Interruptions to customers' water supply of greater than 3 hours duration, measured in average minutes across the year	Our overall performance on interruptions to supply has been impacted by a significant incident in Walpole, Suffolk, in January 2024. Prior to this our run rate on interruptions for the year was substantially better than target. Nevertheless we expect our performance to remain in the upper quartile of the industry.
Internal sewer flooding	1.89	1.84	1.58	1.22	1.44	The number of buildings and homes that are flooded by sewage entering them, per every 10,000.	While internal flooding incidents were slightly higher than in the previous year overall since the end of 2019/20 we have reduced the number of internal sewer flooding incidents we report by more than 65%.
Leakage NW	1% increase	0.1% reduction	3.6% reduction	10.1% reduction	9% reduction	The amount of water which leaks from pipes between our water treatment works and customers' homes and businesses, measured on a three-year average.	We continue to reduce leakage in both regions, achieving our reduction target overall by beating it in Essex and Suffolk and missing it by the narrowest of margins in our northern operating area. In combination across both regions we have delivered the level of reduction we committed to.
Leakage ESW	0.5% reduction	3.2% reduction	7.4% reduction	16.3% reduction	10.5% reduction		

Reliable services

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Compliance Risk Index (CRI)	7.11	6.36	9.50	3.45	0	A measure of how well we are managing risks to drinking water quality and investing to keep drinking water clean and safe to drink.	Our CRI was 3.45 (to 2 decimal places) against a PC level of 0, incurring a penalty of £2.718 million. Despite not meeting the target this performance represents an improvement in performance from our overall score in 2022 by 4.17 CRI units. For 2023 most of our CRI score is derived from compliance failures in our North East operational area as was the case in 2022. Our Essex and Suffolk operating area CRI score for 2023 was 0.097 which based on industry wide figures shows a performance near the top of the industry.

Affordable services

Accreditations

BSI for Inclusive Services – this has now been replaced with ISO 22458 - achieved

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Satisfaction of customers who receive additional financial support	9.3	9.2	9.2	8.9	8.7	Some of our customers are on a reduced bill because they are struggling financially. We survey these customers to ask them how satisfied they are.	We continued to beat our satisfaction target in relation to financial support with a high score of 8.9. In our latest survey, 46% of customers said the reason for their satisfaction score as they found our service helpful or reassuring. Customers also say that they think the schemes are a good idea and beneficial.
Percentage of households in water poverty	7.87%	9.61%	15.27%	14.01%	9.42%	The percentage of households who spend more than 3% of their income, after housing costs, on their water and sewerage bill.	We have not achieved this PC. When we first set our water poverty target, we had an estimated 22% of our customer base in water poverty, equating to 380,000 households. This was based on the best forecast information available at the time about how incomes might change in the future. We set out to reduce this number to 140,000 households by 2025, a reduction of 240,000..
Customer perception of value for money	8.3	8.2	8.2	7.9	8.4	We survey customers to ask them if they think their water bill represents value for money.	This year the average satisfaction of customers answering whether they think the services we provide represent good value for money dropped to 7.9 out of 10 meaning we missed our 8.5 target. The ongoing affordability and trust challenges are impacting customers' perception of value for money. Addressing these challenges is crucial to improving performance against this metric

Efficiency and prudent investment							
Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Expenditure versus allowance		+1.3%	+2.5%	2.5%		Our regulator sets an allowance for how much we can spend on delivering services to customers. This is a measure of whether we stay within our allowance.	We spent more than our allowance in the last year, largely as a result of major increases in power prices since that allowance was set.
Credit rating	Moody's (Baa1) and S&P (BBB+)	Moody's (Baa1) and S&P (BBB+ negative outlook)	Moody's (Baa1) and S&P (BBB stable outlook)	Moody's (Baa1) (Stable) and Fitch (BBB+)		An external assessment of whether a business is considered to be capable of meeting their financial commitments, including paying for day to day operations, investing for the future and repaying debt.	Our credit rating improved in the last year to Baa1/BBB+ (Stable). The Board places a strong focus on maintaining long term financial resilience. We maintain a detailed five-year plan that is updated regularly and formally reviewed by the Board annually. This is underpinned by a commitment to maintaining an investment grade credit rating, as assessed by independent credit rating agencies Moody's and Fitch.

Sustainability and resilience

Accreditations

ISO 55001 Asset management

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
GPTW Trust index	62%	67%	70%	77%	72%	The Great Place To Work (GPTW) trust index is calculated through an annual survey which asks our employees to rate what it is like to work for our company.	We have been listed for the fourth time by the Great Place to Work as one of the UK's Best Workplaces in the super large category. Being recognised nationally as a great employer is a fantastic achievement and something we are very proud of.
Mains repairs	127.0	110.9	154.9	109.7	127.9	The number of repairs we carry out to burst water mains each year	We have repaired 109.4 mains bursts per 1,000km, which is well below our PC of 127.9. In 2023/24 we replaced approximately 20km of distribution main in the Northeast and 10km of distribution main in Essex and Suffolk. We are also continuing to identify new pressure management opportunities as well as optimising existing assets to reduce mains bursts.
Unplanned outages	5.96%	4.57%	3.40%	2.93%	3.35%	When we are unexpectedly unable to produce water from one of our water treatment works because of a fault.	Ofwat set us the stretching target of having only 2.34% of unplanned outages by the end of 2025, with a glide path to demonstrate us getting there year on year. Every day we discuss how best to look after the treatment of water and the control of its distribution around our network. We look to minimise the time of any unplanned, or planned treatment issue and over each year we are tested by the weather. We have further improved our UPO performance, reporting 2.89% across the year against a performance commitment for 2023/24 of 3.35%

Sustainability and resilience

Measures	2020/21	2021/22	2022/23	2023/24	Target	Measure explanation	Performance explanation
Sewer collapses	9.82	8.71	9.29	8.43	8.79	The number of sewers which have collapsed and are releasing sewage into the environment or causing disruption for our customers.	We have achieved our PC for the year, having reduced the number of sewer collapses by 9% compared with last year. This means that over the last 5 years we have reduced the number of sewer collapses on our network by over 54%.
Risk of severe restrictions in a drought	0%	0%	0%	0%	0%	The risk that we would have to restrict the amount of water customers can use during a drought.	We report a result of 0% of population at risk for this metric, meeting our PC, reflecting progress to date with implementing our WRMP19 schemes.
Risk of sewer flooding in a storm	16.11%	16.11%	16.11%	16.11%	24.8%	The percentage of homes that may be at risk of flooding due to a sewer overflowing during a storm.	Modelling work showed we achieved our target to reduce risk of flooding four years ahead of schedule.

Thank you for reading.

We hope you found this report informative and inspiring.

If you are interested in finding out more, this report sits alongside our **Annual Performance Report and Financial Statements** which provide complete financial and regulatory data.

For any queries or to find more information on any of the work we have covered here visit nwg.co.uk or email communities@nwl.co.uk.