Our operational performance

How we measure **our progress**

Our Water for Life Business Plan 2020–25 is broad and ambitious and includes 47 clear customer commitments. We recognise that performance needs to be improved for our customers and the environment, therefore, we have detailed plans to turnaround performance. They explicitly target improvements across four areas: understanding and supporting our customers and communities; ensuring a supply of high-quality water for the future; protecting and improving the environment; and enabling and empowering our people. Read more about our performance measures in our Annual Performance Report.

Understanding and supporting our customers and communities

Outcome	Why it is important	Associated operational delivery incentive (ODI)	Performance			End of AMP target	End of AMP Status	Link to executive remuneration
			2022–23	Trend	2021–22			
Deliver great service								
Customer experience	Customers want to see us improve our customer service performance. They want us to minimise the impact of issues and disruptions to their daily life. When shown comparative information, they expect us to do better.	C-MeX	–	–	–	Median	–	
		Void properties	–	^	–	2.56	✓	Direct
		Gap sites	–	^	–	65	✓	
Sewer flooding prevention	It is essential that our network stops homes being flooded with waste from sewers. There is strong support to ensure we continue to improve sewer flooding prevention.	Internal sewer flooding	–	^	◎	274	✓	Indirect
Supporting the vulnerable	Customers find the concept of the social tariff acceptable. They want us to protect the most vulnerable in society, and find it acceptable to pay a little extra on their bill to help those in genuine need. They want us to partner and provide support by understanding and acting on customers' individual circumstances.	Customer satisfaction with vulnerability support	–	–	–	90	✓	Indirect
		Effectiveness of financial assistance	–	^	–	90	✓	
		Priority services for customers in vulnerable circumstances	✓	^	–	7.0	✓	
		Value for money	–	–	◎	80	✓	

Link to executive remuneration: Direct – there is a specific performance measure included within the bonus scheme that is linked to the performance commitment. Indirect – there is a link to the performance measures in the bonus scheme but that it is a component of one of the metrics used for assessing performance rather than a specific/individual metric.

Key:

- ✓ Ofwat target met or exceeded
- – Ofwat target missed but performance improved in relation to prior year outcome
- ◎ Ofwat target missed and performance was worse than prior year outcome
- ^ Improving
- – Static
- v Deteriorating

Our operational performance continued

Outcome	Why it is important	Associated operational delivery incentive (ODI)	Performance 2022–23	Performance Trend	Performance 2021–22	End of AMP target	End of AMP status	Link to executive remuneration
Use water wisely								
Water consumption	Customers are interested in understanding more about their water usage. They see saving water as a partnership issue and are looking for us to help them save more.	Per capita consumption	Outperformance	Down	Outperformance	118.8	On track	Indirect
		Target 100	On track	Up	On track	55.00	On track	
		Water saved from water efficiency visits	On track	Up	On track	2,500	On track	
		Access to daily water consumption data	On track	Flat	On track	3,529	On track	
Fit for the future								
Growth	Businesses think it is important to work with councils and developers on infrastructure. Customers recognise the challenge of new homes drawing on our network and expect us to ensure it is fit for the future.	D-MeX	On track	Flat	On track	Median	On track	Direct
Community engagement	Keen for us to focus on our role in the community, our customers want us to collaborate with local groups on important issues, support community outreach programmes and educate the next generation in schools.	Community engagement	On track	Flat	Outperformance	75	Achieved	No link
		% of schools giving good or excellent feedback from visits	Achieved	Up	On track	90	Achieved	

Our operational performance continued

Understanding and supporting our customers and communities continued

Improving customer experience

We are working hard to improve customer satisfaction by making the experience of dealing with us easier and more efficient for our customers. We are also focused on better engagement with our communities, while demonstrating environmental leadership. It is, therefore, disappointing that we have not improved our customer satisfaction (C-MeX) score from last year, remaining in 16th place in the rankings out of 17 water companies, incurring an ODI penalty of approximately £4.8 million.

While we are disappointed with the lack of immediate improvement in our score, we are confident that the plans we have in place will produce results in both our customer and wholesale team measures in the long term. It is worth noting here that C-MeX is also strongly influenced by historic as well as current political, media and public attention around national issues, such as drought and storm overflows.

We continue to make improvements across our customer experience by increasing our self-serve options and enhancing the quality of our customer data. This, in turn, has allowed us to send our customers more personalised communications, at the right time.

We have also spent considerable time getting out into our communities to find out what customers really want from us. This has resulted in some significant improvements to our operational signage and has led to us hosting more face-to-face drop ins to provide information about the work we are carrying out locally.

Following water incidents over the past year, particularly the July 2022 incident in Sheppey, we increased our use of text messaging and changed the way we manage our bottled water stations, to improve access for customers. Insight surveys we have carried out since have told us that these measures were positively received by customers.

We have also made improvements to the way we work with customers who have been impacted by internal and external sewer flooding. This includes a new information leaflet given to customers at the time of a sewer flood, as well as 1:1 case management for the worst affected customers. We have also updated our website with better information and advice.

In addition, we have made improvements to our 'report a leak' service online, with a simplified reporting form and confirmation email. We are now designing a new 'report a problem' map, which will enable customers to self-report leaks and be provided with text updates on when they will be fixed.

We held various well attended stakeholder meetings, with local MPs as well as council members. Following water outages in Broadstairs, Ramsgate, Manston and Margate, we held a public drop-in session in March. We talked to around 40 customers about the cause of the supply disruption, what we were doing to improve resilience in the network – including tackling storm overflows and other discharges – and how to receive assistance in making compensation claims.

We also held two similar sessions for our customers on the Isle of Wight, at venues in Ryde and Newport. More than 250 people heard about our storm overflow reduction plans, saw how they could use water in the home more efficiently, and learnt about how our social tariffs can help customers to pay their water bills. We also had subject matter experts on hand to discuss the water recycling element of our Sandown Pathfinder project, explaining how we are working to find new sources of water.

Work to improve our processes has resulted in us removing 4,400 void properties from our records this year. This has reduced the percentage of void properties to 2.82% (2020–21: 3.12%). Unfortunately, despite this improvement, we did not meet our Ofwat target of 2.68% and we have incurred a regulatory penalty of £0.6 million. We are confident that we can remove 7,000 void property addresses over the next year.

Through our joint billing contract with South East Water, 37 gap sites (2020–21: 33) were identified against our overall target of 65. An address matching exercise completed by year-end will support processes to identify gap sites in our supply region during 2023–24.

Our operational performance continued

Understanding and supporting our customers and communities continued

Protecting our customers' homes from flooding

We want to avoid the distress and inconvenience that internal and external sewer flooding can cause to our customers' homes and businesses as well as the environment. Blockages remain the predominant cause, with heavy rainfall causing additional capacity issues. The digitalisation of our wastewater network will be key to monitoring and avoiding incidents going forwards.

In 2022–23, the number of internal sewer flooding incidents was 496 (2021–22: 614). This reduced from the previous year, however, we did not meet our Ofwat target of 321 and incurred a penalty of £3.7 million. For external sewer flooding though, we have outperformed our target for the third year in a row, achieving a total of 3,748 incidents (2021–22: 3,944), earning us a reward of £0.67 million.

Our Fat, Oil and Grease (FOG) and Unflushables team has been out meeting customers in our communities to explain the importance of keeping FOG out of drains and not flushing any items that may cause blockages, such as wet wipes. We have also carried out sewer network cleaning and other blockage reduction activities.

In 2022, we began the roll-out of over 23,000 sewer level monitors as part of a programme to digitalise our wastewater network. The monitors are installed in manholes across high-risk areas of our region, and they can connect digitally with our Control Centre to proactively detect potential blockages. This smart technology enables a quick clean-up of the wastewater pipes to take place before the blockage causes pollution. The software used is a machine learning tool that constantly improves its data monitoring.

In 2023 our flooding reduction plan aims to focus strongly on root cause analysis to drive a first-time fix approach to make sure that our customers do not suffer a repeat incident. This includes empowering our teams to deliver solutions and using insight to target our proactive interventions in a very precise way.

Our operational performance continued

Understanding and supporting our customers and communities continued

Supporting those customers who might be vulnerable due to circumstances

Customers that need greater support are a key focus for us in terms of engagement. Each year we survey a cross-section of our Priority Service Register (PSR) customers to understand their satisfaction level with the service and support we provide, and where this can be improved.

As part of our research panels, we have a bespoke group of vulnerable customers, recruited from across our region. We carry out in-depth interviews with them, which allows us to understand their unique circumstances. Additionally, we speak with a representative sample following major loss of supply incidents – to specifically understand how we can continue to improve.

We maintained the level of satisfaction with vulnerability support at 73% (2021–22: 73%). We also increased the number of customers on our Priority Services Register (PSR) to 166,384, representing 8.3% of our households, which is already above the target of 7% by March 2025 set by Ofwat.

During the year, our bills went up in line with inflation, increasing the average annual dual bill from £401 to £439. At the same time, recognising the challenge of the rising costs for households, we announced a £98 million support package and increased the minimum discount on bills from 20% to 45% for 104,000 vulnerable households, which is an average annual saving of almost £200 on a dual service bill. The effectiveness of this type of support has improved, with a score of 71% (2022: 67%), although this was below our target of 80%.

We provide a number of financial assistance packages to help customers, including Watersure, Water Direct, NewStart and Essentials. These offer customers access to payment holidays, debt write-offs and bill reductions.

We also continued to offer support to customers via our Hardship Fund during 2022–23, providing a total of £20,000 a month. This funds three main types of assistance: debt relief, bill reductions and support to purchase household items where needed. Each of these is aimed at helping different segments of our customers.

The percentage of customers surveyed by the Consumer Council for Water (CCW) that are satisfied with the value for money of water and sewerage services in their area is 71% (2021: 67%), falling short of our target of 77%.

Supporting our customers and communities to save water

We want to create a future where our customers and colleagues act as stewards of our water environment.

We continue to work with our customers year-round to help them save water. Our three-year rolling average for per capita consumption is 133.7 litres per person, per day (2021–22: 133.6 litres per person, per day) against our target of 119.5 litres per person, per day. Although water use is now decreasing, the three-year rolling average fully reflects increases that we saw during the pandemic. Since a peak in consumption of 139 litres per person, per day in 2021, the in-year average has now reduced to 128.4 litres per person, per day.

Our plans to reduce demand have evolved. We want to manage and reduce the amount of water our customers are using – household, businesses and developers – using behavioural science principles to create sustained change.

Helping our customers save water is the focus of our ongoing Target 100 campaign, aiming to reduce daily average daily water usage to 100 litres per person, per day. Over the past year, it has focused on water scarcity, to help build awareness that demand will soon outstrip supply, and that unless we all work together, we will face a supply deficit. This included the promotion of easy tips and advice on ways people can save water around the home.

The customer campaign included direct customer emails, social media posts and ads, press articles and radio and DAX (Digital Ad Exchange) advertising, as well as ads on buses. We also used social media influencers for the first time to also push water-saving products such as tap aerators and water-efficient shower heads. We reached over 298,000 people, delivering 352,000 impressions and received 25,000 engagements with customers.

We took a slightly different approach with the high consumption areas of Hampshire and Isle of Wight, with more targeted messaging about protecting the local environment, chiefly local rivers and chalk streams. This laid the foundations for when we went into drought in these areas in July and had to implement a Temporary Use Ban from August to November.

We had regular communications with customers, stakeholders, businesses and employees, keeping them up to date on restrictions, the work we were doing to mitigate drought, and ways they could save water. We also launched an industry leading 'You Save, We Pay' initiative with our business consumers, offering them incentives for saving water. Read our drought case study on page 57.

In May we launched a 12-month awareness campaign called 'Save a little water, make a lot of difference'. It represents the start of the journey we want to take customers on, right up to 2040, and uses seven triggers to accelerate behaviour change. These include things like water-saving

Our operational performance continued

Understanding and supporting our customers and communities continued

home visits, smart meter technology and new tariffs, as well as communications and marketing. We have also refreshed our education materials and will be pushing for changes in the way we all think about water in public policy.

We carried out 8,130 water-saving home visits during the year, delivering a cumulative saving in cubic metres per day (m^3/d) of 534 m^3/d against a target of 1,500 m^3/d. These visits targeted households using large amounts of water.

We also targeted those living in our Sussex North region where we are working with Local Planning Authorities to maintain water neutrality. This means making sure that any new homes built do not use more water, putting more pressure on the local environment. To support developers with their questions on water neutrality, we now offer them a dedicated point of contact and access to a monthly newsletter. We are also planning annual events and regular webinars.

A total of 10% of home visits had a check with any defects reported to our Leakage team. We fitted 279 waterbutts and over 500 leaky loos were fixed via home visit referrals, with over 3,000 save-a-flush bags sent to customers for use in their toilet cisterns. We also completed flow restrictor trials at 500 social housing properties in Hampshire, achieving a saving per household of 64 litres per year.

Following the visits, over 1,000 customers have been referred to our Affordability team from home visit engineers, to potentially move customers to a tariff that works better for them.

We are also collaborating on a five-year campaign with Hampshire and the Isle of Wight Wildlife Trust's Watercress and Winterbourne's 'Save Every Drop' campaign to promote water-saving visits and the link between waterways and the water we use every day.

One way to help customers understand their water use and to be able to save water, is through giving them access to daily water consumption data. We have, therefore, accelerated our plan to roll out smart metering to customers and 1,500 customers are now part of a pilot, which aligns with the trial of a smart clip-on device for an existing water meter.

Working with our communities to manage growth

We maintained our ranking of 15th out of 17 water companies for our Developer Services satisfaction score (D-MeX). We constantly monitor our service levels and over the year we have made regular updates to our website, launched a new easy-to-use budget estimate calculator and increased our direct technical support.

We have also improved the process for people to apply for new water connections, giving them the option to submit photos for virtual site inspections and allowing them to share their screen with our agents so we can better guide them through the process. There is also a checkpoint for wastewater applications, speeding up the process significantly.

Engaging with our communities and working with local charities

During 2022–23 we launched a new community engagement strategy, focused around four key pillars: building skills by sharing our expertise and supporting young people; making our communities stronger by making sure they feel valued and heard by us; caring for the environment together; and demonstrating our positive impact and responsibility. Built on customer insight, this strategy seeks to address some of the regional challenges faced by our customers and our business.

To deliver this new strategy we have expanded our community team, creating a new role for a dedicated Education Officer. Read all about our new education programme on page 49. We are also excited to have seen a huge increase in colleague volunteering hours this year – see page 72.

Building skills for our community

Over the year a particular area of focus for us was increasing our work in the community with young people. Ten colleagues started mentoring groups from the Bohunt School and St Andrews High School in Worthing, through Dare to Dream, a programme initiated by the Love Local Jobs Foundation. Aiming to provide local young people with experiences and tools to help them fulfil their potential, it works in partnership with local

Our operational performance continued

Understanding and supporting our customers and communities continued

employers and local radio celebrity Jack the Lad, using themes of self-awareness, mindset, gratitude, resilience, teamwork and employability to drive and motivate the students. Our mentors have been carefully matched to provide one-to-one support, helping to grow pupils' confidence and enable them to achieve their potential.

We continued our relationship with local charity Spear Brighton, which supports unemployed 16 to 24-year-olds to find sustainable employment. The charity was awarded a Community Grant in 2021–22 and as part of the agreement we also offered workplace visits at our Falmer offices.

Over the summer we provided free fire warden and health and safety training at two heritage sites – Twyford in Hampshire and Brede in East Sussex. We also supported the installation of a new defibrillator, in partnership with Twyford Parish Council and Hampshire County Council.

Making our communities stronger

We have been working with our supply chain partners to pilot a scheme to measure the 'social value' of the community outreach work we do. The scheme is running alongside the upgrade of our Horsham Wastewater Treatment Works and, so far, has seen us working with the local branch of homelessness charity Turning Tides as well as local schools and Scout groups. Read more on page 31.

We ran a targeted campaign in Horsham towards the end of 2022, with a monthly outreach event held in the centre of town. In October we also awarded Horsham Matters a £1,000 Energy Grant to help with the charity's energy costs.

In December we hosted several Christmas parties to celebrate community centres that had received our Community Energy Grants. It gave us the opportunity to meet customers and signpost our Priority Services Register and support schemes.

Caring for the environment

Building stronger links with our communities is vital, and in Seaford we have been working with the 'Friends of Seaford' on a project to redesign a green space next to our wastewater pumping station. We created information boards and offered our colleague volunteer support to plant trees and help develop the space.

Our work with the 'Pollinator Pioneers', who received a community grant this year, has seen us help to install beehives next to our wastewater treatment site in East Worthing. The group works with young people to educate them about the importance of pollinators.

Demonstrating our positive impact

We launched a new Community Energy Grant, delivered in partnership with CMDP (a joint venture between Costain and MWH Treatment), to offer independently run community centres, foodbanks, support groups and children's programmes £1,000 per county – awarding £20,000 in total.

We also supported the local Tonnes of Tins campaign in Sussex, collecting 4.8 tonnes of food from colleagues and local residents to support foodbanks before the school holidays started in June 2022. Our Board matched the amount raised by the campaign, and a further £12,000 was donated to local foodbanks.

Last year we invited registered charities to apply for a partnership grant, lasting 18 months, with a focus on improving outcomes for young people. We received 47 applications, and we awarded five Charity Partners in each of our regions.

Educating our communities

We were excited to launch our New Wave education programme this year. Created in partnership with curriculum experts at the National Schools Partnership, it provides opportunities for young people to learn about the water cycle and caring for our natural water sources at every stage of their time at school, providing a range of free online resources for teachers and trainers.

These resources challenge pupils to solve local water problems and make pledges, taking the lead from school materials teaching science, technology, engineering and mathematics (STEM) as well as geography and PSHE (personal, social, health and economic education). In the future, we also plan to offer workplace experiences including wastewater treatment works tours. The tours are already taking place for adults and are being adapted for children.

Our operational performance continued

Understanding and supporting our customers and communities continued

These tours will help to build on our current programme of school talks and workshops. We delivered a total of 120 talks this year reaching more than 30,000 young people and adults, covering a range of topics including the water cycle, water saving, the three 3Ps (pee, poo and paper), how wastewater is cleaned, protecting our rivers, how to prevent blockages by disposing of unflushable items correctly and climate change. We ask schools and community groups for feedback on these sessions and overall participants were 98% satisfied with the talks they received.

Alongside these regular school visits, we also continued our partnership with the South East Rivers Trust and Wessex Rivers Trust to spread our water-saving message, which helps to protect our environment and local rivers. The South East Rivers Trust and Wessex Rivers Trust are running 'Our River, Our Water' educational sessions on our behalf to support the curriculum. These sessions give primary school aged children the chance to study science on the riverbank and learn about the vital habitats that live, grow and thrive there.

Over the year we also completed some practical, problem-solving sessions with Girl Guide and Scout groups across Hampshire and Sussex, with groups taking part on water filtration and water supply challenges. We plan to combine these with the Our River, Our Water sessions over the coming months to reach more groups across our region.

A look ahead – our Turnaround Plan

We are committed to improving customer experience and our reputation. By 2025 we aim to have delivered an improved customer experience, increasing our C-MeX score. We will do this by:

- Making things easier for our customers by creating a new website, improving our data quality and complaints process. We will also introduce a video assistant for customers.
- Creating a customer culture. Making sure that every colleague understands our customers and their unique needs. This includes the introduction of customer promises and customer service training for all colleagues and partners.
- Better engagement with our communities through improved multi-channel and direct communications, education programmes and regular stakeholder forums.
- Supporting customers in vulnerable situations by improving our priority services during incidents and our social tariff offering.

CASE STUDY

Understanding and supporting our customers and communities

Helping **future generations** understand the importance of saving water now

"Teaching young people about water saving early in their school life, is the one of the best ways to make sure our water resources are protected long into the future. We've expanded our education programme over the past year to reach over 30,000 children, telling them how to save water and about where it comes from.

"When I arrive at a primary school, I know it's important to really engage the children to get their interest. I give talks on our key messages and enjoy hosting our water supply challenge game, where upper KS2 children can take part by building a network of pipes.

"We're working hard to introduce a more systematic approach to learning. By offering a variety of activities – curriculum-linked lessons, classroom talks, outdoor activities, specialist speakers and workplace visits to treatment works. We will have five to six opportunities to engage with young people throughout their time in school.

"Whether we're talking about how to save water at home or what it takes to clean up their wastewater, we want these young people to take our messages on board and use them as part of their everyday life.

"Through education, behaviour change will happen, and our water sources and the environment will be protected for future generations to enjoy."

Joanne Wood, Education Officer

Our operational performance continued

Ensuring a supply of high-quality water for the future

Outcome	Why it is important	Associated operational delivery incentive (ODI)	Performance 2022–23	Performance Trend	Performance 2021–22	End of AMP target	End of AMP status	Link to executive remuneration
Deliver great service								
Water quality	It is essential to always provide clean, safe drinking water. This is seen as a basic service from a water company and the most important of the services we provide. Our customers' preference is for water to be as natural as possible.	DWI compliance risk index (CRI)	Ofwat target missed but performance improved in relation to prior year outcome	Improving	Ofwat target missed and performance was worse than prior year outcome	0.00	Ofwat target missed but performance improved in relation to prior year outcome	Indirect
		Drinking water appearance	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target missed but performance improved in relation to prior year outcome	0.46	Ofwat target missed but performance improved in relation to prior year outcome	
		Drinking water taste and odour	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target met or exceeded	0.21	Ofwat target missed but performance improved in relation to prior year outcome	
		Replace lead pipes	Ofwat target missed but performance improved in relation to prior year outcome	Static	Ofwat target missed but performance improved in relation to prior year outcome	43	Ofwat target missed but performance improved in relation to prior year outcome	
Water supply interruption	Customers want us to be able to deal with problems, such as interruptions, quickly and efficiently. Any interruptions require clear communication, as they can cause inconvenience and distress to customers.	Water supply interruption	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target missed but performance improved in relation to prior year outcome	0:05:00	Ofwat target missed but performance improved in relation to prior year outcome	Indirect
Water pressure	Customers expect a standard of water pressure to be part of the basic service we provide.	Properties at risk of receiving low pressure	Ofwat target met or exceeded	Improving	Ofwat target met or exceeded	182	Ofwat target missed but performance improved in relation to prior year outcome	Indirect
Use water wisely								
Leakage	Customers say it is essential to reduce the amount of water lost through leaks from our network. They believe water is a precious, natural resource and expect us to look after and use it wisely.	Leakage	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target missed but performance improved in relation to prior year outcome	84.9	Ofwat target missed and performance was worse than prior year outcome	Indirect

Link to executive remuneration: Direct – there is a specific performance measure included within the bonus scheme that is linked to the performance commitment. Indirect – there is a link to the performance measures in the bonus scheme but that it is a component of one of the metrics used for assessing performance rather than a specific/individual metric.

Key:

- Ofwat target met or exceeded
- Ofwat target missed but performance improved in relation to prior year outcome
- Ofwat target missed and performance was worse than prior year outcome
- Improving
- Static
- Deteriorating

Our operational performance continued

Outcome	Why it is important	Associated operational delivery incentive (ODI)	Performance			End of AMP target	End of AMP status	Link to executive remuneration
			2022–23	Trend	2021–22			
Fit for the future								
Asset health	It is essential to be investing in our sewer networks, pipes and drains. Our customers want us to upgrade where we can and use innovative and sustainable solutions.	Unplanned outage	✓	^	✓	3.25	✓	Indirect
Water resilience	Customers want to ensure supply for future generations. They are willing to invest now to ensure that there is no deterioration of services in the future.	Water supply resilience	✓	^	✓	77,622	✓	No link
		Long-term supply and demand schemes	–	–	⊙	0	–	
		Risk of severe restrictions in drought	✓	–	✓	0.00	✓	
		Impounding reservoirs	–	–	✓	100	–	

Our operational performance continued

Ensuring a supply of high-quality water for the future continued

Improving water quality

Any risk to water quality is measured by the Compliance Risk Index (CRI), with any failures being assessed by the Drinking Water Inspectorate (DWI). Our CRI score for 2022 was marginally better than the previous year, at 6.38 (2021: 6.69). The scores from treatment works and supply points remained fairly static, whereas service reservoirs dropped and breaches at customer taps rose.

The main causes of CRI at our works (70%) were damp and unused sections of pipe, which are being addressed through improved regular maintenance of water tanks. A further quarter was due to issues at our sampling facilities, which are regularly inspected. The increase in CRI at customer taps was due to sediment build up in the mains, which will be addressed by our wider replacement programme in the next seven years. Taste and odour of customers' water was also an issue in some areas of Hampshire, which will be improved by the planned installation of carbon treatment at Otterbourne Water Supply Works by 2031.

We achieved a score of 0.24 (2021–22: 0.23) for taste and odour – measured in contacts per 1,000 population, missing our target of no more than 0.23 contacts. For drinking water appearance, our score was 0.93 contacts per 1,000 population, against a target of 0.65 contacts. This meant we incurred a combined ODI penalty of £1.34 million.

In July, we started work in Deal, Kent to replace old water mains containing lead. The pilot project will take about 24 months and will see us replace pipes to the boundary of customers' properties, as well as offering sampling in their homes and advice and support if they want to get a plumber to replace internal lead pipes. As some customers might have been worried about the discovery of lead pipes in their homes, we also offered drop-in sessions so they could meet our team and ask any questions they might have. We also sent letters and leaflets out to those affected and created a central hub of information on our website: **southernwater.co.uk/deallead**.

This is a trial scheme, which will help shape the strategy for other lead replacement schemes across our region.

Working to limit the time our customers are without water

Our aim is to provide our customers with a reliable supply of high-quality water, so we were disappointed that several significant incidents during 2022–23 left our customers without supply for a longer than average time. This has taken the average number of minutes that our customers were without water shown in hours, minutes and seconds as 01:28:10 (2022: 00:09:22), exceeding our target of 00:05:45 by a significant margin.

In June 2022, we saw a decrease in water supply interruptions compared to June 2021 and a reduction in mains bursts in the same period. Since June, we had a number of atypical bursts which affected large numbers of customers. In July, a single event on the Isle of Sheppey contributed 34 minutes to the overall year total. In December and January, two events at Hampshire Yew Hill WSR and Broadstairs in Kent added a total of nearly 45 minutes to water supply interruption.

Since these incidents, we have improved our response by focusing on better communication with customers, such as using text messages to keep customers updated during an incident. We now provide more frequent updates on social media and the website, including our incident map. By increasing resources, we have been able to respond more quickly to customers' messages and posts. We have also made sure that bottled water availability and deliveries have been improved, so we can open bottled water stations more quickly when required, as well as providing more effective delivery to our vulnerable customers.

Managing water pressure and reducing leakage

We outperformed our Ofwat target of 212 properties at risk of low pressure with 207 properties (2021–22: 210). Targeted cleaning and flushing of pipes helped keep the number of properties affected to this level.

For leakage, we recorded 108.5 Ml/d (2021–22: 94.9 Ml/d) against a three-year rolling average target of 90.9 Ml/d, resulting in a regulatory penalty of

Our operational performance continued

Ensuring a supply of high-quality water for the future continued

£2.332 million. Unprecedented weather conditions over the drought in the summer and rapid changes in temperatures during the winter resulted in high leakage levels. We want to keep water in the network by working hard to reduce leakage.

We increased our find-and-fix teams by 20% and we are exploring new technology to locate leaks, including the use of satellite mapping. A programme of advanced pressure management schemes has been delivered, with further improvements planned over the next two years. You can read our case study on this new approach on page 58. Our approach has led to us repairing up to 500 leaks a week in 2023.

Improving the health of our assets

The percentage of production capacity lost due to unplanned maintenance work is measured in our performance commitment of unplanned outage. We outperformed our target of 7.33% for unplanned outage with 6.44% of production capacity lost due to unplanned maintenance work (2021–22: 7.19%).

Improving water supply resilience

We want to make sure that our water supply system is resilient for the future and this means limiting the number of properties at risk of long-term loss of water supply (>48 hours). We are pleased to report a reduction in the number of properties at risk at 129,111 (2021–22: 131,201). This means we outperformed on our target of 142,987 in the areas of Thanet, Brighton and the Isle of Wight. Further improvements will be driven through risk reduction schemes, with anticipated delivery in 2024–25.

The long-term supply and demand schemes address supply capacity, for delivery by 31 March 2027. We are on track to deliver schemes for the Southampton and Andover link mains, as well as Sandown water recycling scheme, East Woodhay and the other smaller transfers. We are forecasting delays on two water recycling schemes at Ford and Aylesford, and two schemes will no longer be going ahead at Shoreham and Knapps Mill. An alternative for the Shoreham scheme is being progressed through our Water Resource Management Plan 2024, and the Knapp Mill scheme is covered by the Hampshire Water Transfer & Water Recycling project.

No customers were at risk of severe restrictions from a 1-in-200-year drought, in line with our target. This risk is measured as an average, over 25 years.

For schemes under the programme of work enhancing the safety of four reservoirs (Bewl, Darwell, Powdermill and Weir Wood), enhancements at Bewl reservoir are on track, and Powdermill does not require enhancements (as per the 2019 inspection). The Section 10 independent inspections for Darwell and Weir Wood will not be taking place until the end of this programming period, so any upgrades to these reservoirs will only take place in the next programming period 2025–30.

Our operational performance continued

Ensuring a supply of high-quality water for the future continued

Progress on our Water for Life – Hampshire programme

Work on our Water for Life – Hampshire programme has continued apace this year as we develop our plans to protect the Test and Itchen rivers by developing new sources of water.

A number of projects are included under the programme's banner, due to the amount of water needed to make up the supply shortfall we expect to experience in the area. We will need to develop a range of measures to resolve it. We are working hard to reduce leakage and improve water efficiency, but we also need to find new sources of water to use for supply.

As part of our plans, we are funding the new Havant Thicket Reservoir, which Portsmouth Water is building as part of an innovative cross-company collaboration.

Last summer we held a public consultation on our plans to supplement the spring water in the reservoir with recycled water – to make sure there is more available during a drought. A further public consultation will be held next year.

Called the Hampshire Water Transfer and Water Recycling Project, it is the largest component part of the Water for Life – Hampshire programme.

While water recycling is well-established technology, it is relatively new to the UK, so we set up a water recycling pilot plant in Havant to better understand the treatment processes involved. Thousands of water quality tests are being taken and shared with our regulators. We will publish the results of these on our website in the coming months.

We also welcomed more than 100 representatives from local councils, environmental groups and our regulators to visit the pilot plant and find out more about how water recycling speeds up the natural water cycle to provide a safe, sustainable source of drinking water.

We have plans for four water recycling plants in our region. The three other potential sites for water recycling plants are Sandown on the Isle of Wight, Ford in Sussex and Aylesford in Kent.

A look ahead – our Turnaround Plan

We are committed to improving the reliability of our sites and networks. By 2025 we aim to have improved water quality, achieving 3rd quartile performance against our peers. We will do this by:

- Putting in place new assets and improving maintenance at our water supply works. This includes the complete overhaul of our four main sites, impacting 62% of our customers.
- Using digital technology to build smart networks with new loggers, sensors and smart meters to reduce leakage and enable our teams to respond more quickly.
- Upgrading our logistics capability so we can move people and materials around faster, 24/7. This includes a new tanker fleet, storage of critical spares and an overhaul of our work management processes.
- Improving our management and control of our sites and networks through a constant review of our core systems and processes.

CASE STUDY

Ensuring a supply of high-quality water for the future

Summer 2022 and our first drought for a decade

What happened and why did we need to introduce a Temporary Use Ban in Hampshire?

"Our water resources are under pressure in the South East due to changing weather patterns and a rapidly increasing population. The entire region is classed as an 'area of serious water stress' by the government.

"In Hampshire and on the Isle of Wight, the situation is even more critical as we rely on the protected chalk streams of the River Test and River Itchen for much of the supply. A few years ago, we agreed with the Environment Agency to lower our abstraction permits on these rivers, which means we can take less to put into supply than ever before.

"To make sure we are prepared, we regularly update, consult on and submit a Drought Plan to our regulators, which includes a wide range of plans, interventions and temporary restrictions that we can put in place when these water sources come under pressure. In severe droughts, we can also apply for Drought Permits and Orders which allow us to take more water from underground sources and rivers and, in extreme situations, introduce restrictions on businesses and homeowners.

"In July 2022, after one of the driest years on record and months of no rain, we applied to the Environment Agency for a drought permit to continue taking water from the River Test. For the first time since 2012, we had to impose temporary use restrictions on our customers. This was to protect the environments we take water from and make sure enough water was available to keep customers' taps running.

"We were also the first UK water company to introduce an incentive scheme for business consumers, to encourage and support them to save water – our You Save, We Pay initiative. In total, this programme helped businesses in Hampshire save eight million litres of water.

So how do we make sure that this doesn't keep happening?

"We have a Water Resources Management Plan in place to reduce our reliance on restrictions, and we're aiming to stop using them by 2040 at the latest. To do this, we need to find 120 million litres of extra water per day.

"There's no silver bullet, and in order to 'find' this extra water, we need to work with neighbouring water companies, our customers, partners in the community and our regulators to: reduce leakage by at least 50% by 2050, using new technology and replacing old water mains; continue to help customers to reduce their use to 100 litres per person, per day; and invest in two new reservoirs, including one at Havant Thicket in Hampshire. In total, we are spending £100 million on network and supply resilience improvements to 2025.

"We're also exploring new transfers with neighbouring water companies and how we can potentially use new technology like water recycling and desalination at sites across our region."

Paul Riordan – Drought Manager

CASE STUDY

Ensuring a supply of high-quality water for the future

We work **24 hours a day**, seven days a week to find and **fix leaks** on our network

"Our leakage teams work 24 hours a day, seven days a week to find and fix leaks on our 13,919 kilometre water network, and it's a huge challenge. We currently have around 185 leakage technicians fixing close to 500 leaks per week, that's 25,500 leaks a year. We've also trained 21 new technicians since April 2022.

"For years we have been using acoustic loggers (used to listen for leaks), which work well on metallic pipes. These listen for leaks at night while everyone is sleeping, and help our teams identify points of interest to investigate. We also use Hy-Q sensors on non-metallic pipes, which listen to the flow of water. Some of these loggers are fixed in certain areas, and others get moved around as the team cover the network.

"We're always looking into new technology, and we've started to trial using satellites to spot leaks. It's early days as the technology is very new, but we're working with two companies, called Suez and Asterra to convert satellite radar signals to detect leaks – even up to three metres below the surface of the ground. The other great thing is that these satellites can scan up to 350,000 km^2 in one pass.

"It's advanced technology that uses a series of filters and algorithms to interpret the data to show only 'drinking water mixed with soil'. It then overlays it onto our network maps showing us 'points of interest'. These satellite leak detection maps can then be displayed in an easy-to-use app, accessed on a smartphone by our teams out in the field. Our teams then carry out surveys across these highlighted areas.

"The technology was originally designed to find water on Mars so it's exciting to see how it will help us find more leaks, faster."

Matt Foley – Operations Manager

Our operational performance continued

Protecting and improving the environment

Outcome	Why it is important	Associated operational delivery incentive (ODI)	Performance 2022–23	Performance Trend	Performance 2021–22	End of AMP target	End of AMP Status	Link to executive remuneration
Deliver great service								
Sewer flooding prevention	It is essential that our network stops homes being flooded with waste from sewers. There is strong support to ensure we continue to improve sewer flooding prevention.	External sewer flooding	✓	↑	✓	3,525	✓	Indirect
Protect and improve the environment								
Pollution	Customers want us to treat and dispose of wastewater in a way that does not harm the environment. They rightly believe we have a duty to protect and improve the environment in which we operate, and ensuring we do no harm through pollution incidents is the minimum they expect.	Pollution incidents	–	↑	–	77	✓	Indirect
		Thanet sewers	✓	–	✓	0	✓	
High-quality bathing and river waters	Our customers want to see us do more to deliver excellent bathing and river water quality. They want us to recognise the importance of this to tourism.	Delivery of Water Industry National Environment Programme (WINEP) requirements	–	–	–	Met	✓	Direct and indirect
		River water quality	✓	↑	✓	182.30	✓	
		Maintaining bathing waters at ‘excellent’	✓	↓	✓	57	✓	
		Improve the number of bathing waters at ‘good’	✓	–	✓	5	–	
		Improve the number of bathing waters to ‘excellent’	✓	–	✓	2	–	
		Treatment works compliance	–	↑	–	100.00	–	
		Combined sewer overflow monitoring	–	↑	–	100	–	

Our operational performance continued

Outcome	Why it is important	Associated operational delivery incentive (ODI)	Performance 2022–23	Performance Trend	Performance 2021–22	End of AMP target	End of AMP Status	Link to executive remuneration
Protect and improve the environment continued								
Water resource abstraction	Customers want us to use a range of sources to provide reliable services in the future and expect removal of water from the environment to be done in a sustainable way.	Distribution input	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target missed but performance improved in relation to prior year outcome	506	Ofwat target missed but performance improved in relation to prior year outcome	
		Abstraction incentive mechanism	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target met or exceeded	-15	Ofwat target met or exceeded	Indirect
		Effluent re-use	Ofwat target met or exceeded	Deteriorating	Ofwat target met or exceeded	0	Ofwat target met or exceeded	
Renewables	We should be increasing the amount of renewable energy we use in our operations. There is a growing expectation that we should be using our own wastewater services to generate more energy as well.	Renewable generation	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target missed and performance was worse than prior year outcome	24.00	Ofwat target missed but performance improved in relation to prior year outcome	
		Natural capital	Ofwat target met or exceeded	Improving	Ofwat target met or exceeded	3	Ofwat target met or exceeded	Indirect
		Satisfactory bioresources recycling	Ofwat target met or exceeded	Static	Ofwat target met or exceeded	100	Ofwat target met or exceeded	
Fit for the future								
Asset health	It is essential to be investing in our sewer networks, pipes and drains. Our customers want us to upgrade where we can and use innovative and sustainable solutions.	Mains repairs	Ofwat target missed and performance was worse than prior year outcome	Deteriorating	Ofwat target met or exceeded	87.3	Ofwat target missed but performance improved in relation to prior year outcome	
		Risk of sewer flooding	Ofwat target met or exceeded	Deteriorating	Ofwat target met or exceeded	12.42	Ofwat target met or exceeded	Indirect
		Sewer collapses	Ofwat target missed but performance improved in relation to prior year outcome	Improving	Ofwat target missed but performance improved in relation to prior year outcome	222	Ofwat target missed but performance improved in relation to prior year outcome	
Growth	Businesses think it is important to work with councils and developers on infrastructure. Customers recognise the challenge of new homes drawing on our network and expect us to ensure it is fit for the future.	Surface water management	Ofwat target missed but performance improved in relation to prior year outcome	Static	Ofwat target missed but performance improved in relation to prior year outcome	39,730	Ofwat target missed but performance improved in relation to prior year outcome	Direct

Link to executive remuneration: Direct – there is a specific performance measure included within the bonus scheme that is linked to the performance commitment. Indirect – there is a link to the performance measures in the bonus scheme but that it is a component of one of the metrics used for assessing performance rather than a specific/individual metric.

Key:

- Ofwat target met or exceeded
- Ofwat target missed but performance improved in relation to prior year outcome
- Ofwat target missed and performance was worse than prior year outcome
- Improving
- Static
- Deteriorating

Our operational performance continued

Protecting and improving the environment continued

Preventing sewer flooding

We want to protect the environment from any harm caused by sewer flooding. In 2022–23, the number of external sewer flooding incidents fell to 3,748 incidents (2021–22: 3,944), exceeding our Ofwat target of 3,887 and earning us a reward of £0.7 million. The number of internal sewer flooding incidents also fell to 456 (2020–21: 614), although we did not meet our Ofwat target of 321 and incurred a penalty of £3.7 million.

Working hard to reduce pollution

We are reporting a provisional figure of 358 pollution incidents in categories 1-3 (this figure is under review by the Environment Agency). This represents a slight improvement on our performance (2021–22: 372), but still falling outside our Ofwat target of no more than 91 incidents. Following guidance provided by the EA on 21 February 2023, we also tracked five pollutions associated with spills on a dry day in 2022, reported as a shadow metric to test the use of this type of spill reporting.

As part of our pollution reduction programme, we invested in proactive maintenance of our sewerage network and have undertaken extensive research into the root causes of pollutions.

Our root cause analysis of pollutions in 2022 identified that issues with pumping station vulnerabilities and higher than expected levels of seasonal rainfall were the main cause of pollution incidents. This analysis was carried out to inform the next stage of our Pollution Incident Reduction Plan (PIRP) to prioritise and target our activities until 2025.

The PIRP strategy has laid the foundations for a continued improvement in our performance, informing future plans by showing trends from all sources, including electrical and mechanical (MEICA), blockages and bursts, as well as pollutions from sewer blockages. Our 2023 Improvement Plans are focused into three main categories containing 18 separate initiatives delivering a benefit reduction of between 126–212 pollutions.

Digitalising our wastewater network will make a significant difference to our ability to detect and even predict blockages in pipes. We have installed 23,000 sewer level monitors to send water level data back to a powerful machine-learning tool, focusing on areas where blockages happen most frequently. By analysing the data, we can mobilise sewer crews, making it easier to plan ahead and get rid of blockages before they cause pollution incidents.

We are also using technology to make sure customers can access the latest information about bathing waters, in a clear and transparent way. The Beachbuoy online spill notification service provides information about water quality events in our coastal waters and has had a number of upgrades within the year to make the information it displays easier to understand.

Keeping our sewers in good repair will help protect the environment around them. The Thanet sewer enhancement scheme – a £34.5 million rehabilitation project of century-old Thanet sewers to protect customers' home and the environment from flooding and groundwater sources from pollution – is progressing and is on track to be completed by 2025.

Maintaining and enhancing bathing and river waters across the South East

The Water Industry Environment Programme (WINEP) enhances rivers, streams, coastal waters and groundwater sources, through a variety of schemes. We met our commitments for WINEP delivery this year. In total we delivered 348 individual schemes and investigations, including:

- Seven schemes improving water quality in 20.2 kilometres of rivers in our area. This is in addition to the 82.5 kilometres of river water quality improvements we delivered in 2021–22, making a total of 102.7 kilometres and meeting our commitment.
- New event and duration monitors (EDM) were installed on 31 storm overflows this year. This means that we now report on spills made from 98.6% of our combined sewer overflows (CSOs). By the end of December 2023, we will have completed our programme to install EDM monitors on 100% of our CSOs. This is

Our operational performance continued

Protecting and improving the environment continued

in line with government requirements. Our spill reporting data is available online for our customers to access on our website.

- Delivering 81 detailed site-specific investigations about river water quality, bathing water quality, shellfish water quality and water quality in designated areas such as Marine Conservation Zones (MCZs) and Sites of Special Scientific Interest (SSSIs). We carried out these investigations working closely with the Environment Agency and Natural England. These investigations were carried out to make sure that any future capital investment on our assets is targeted to reduce environmental impact.
- Capital schemes in Southampton (at Ensign Park CSO and Millbrook wastewater treatment works) to reduce the frequency and volume of storm water discharges made to Southampton Water. These two schemes were delivered as part of a larger programme of work to improve the quality of Southampton Water. By the end of 2024, we will also be adding new storm water storage at our treatment works at Slowhill Copse, Woolston and Ashlett Creek. New ultraviolet (UV) disinfection will be carried out of the continuous treated effluent flows we release from our Slowhill Copse and Millbrook treatment works. This UV disinfection is being installed here for the first time and will be operational by the end of 2023.

Part of our WINEP delivery is the improvement programme for the water quality in 537 kilometres of rivers in our region by 2030. We met our 2022–23 target for this programme for river water quality by improving 102.7 kilometres of rivers.

As well as river water quality, we monitor bathing water quality. We have over 700 miles of coastline with a total of 84 bathing waters. We met our target for bathing water standards with 57 out of the 84 bathing waters being classified as 'Excellent', compared to 60 last year. There is no obvious reason for this decline from Excellent to Good, except possible increased beach use in this country, during the very hot summer and when the pandemic made foreign travel difficult.

Our monitoring of bathing water samples has allowed us to understand if any high concentration samples are related to releases from assets, rainfall or particular tidal conditions. By monitoring in this way, we can identify any problems with our assets. We aim to improve the number of bathing waters classified as 'Excellent' and the number classified as 'Good'.

Under our bathing water enhancement programme, we continue to gather data at nine bathing waters to understand any sources of contamination. Part of this work includes finding misconnections, which are properties that are not connected to the main sewerage system. We then work with the Environment Agency and local Environmental Health Officers to fix them.

Our FOG (fat, oil and grease) team, and the Network Protection team, also work together to reduce releases to the environment from sewer blockages, as well as checking for any potentially defective sewers close to bathing water sites. We continue to work with a variety of local stakeholders too, liaising with local councils to get specific local knowledge on how to tackle litter, seabirds and controls on dogs. We also engage with farmers on how to reduce pollution from grazing livestock and liaise with holiday park owners to understand the integrity of their private sewerage, assets, treatment methods and disposal.

We achieved 98.22% (2021–22: 97.94%) in terms of our treatment works compliance, with a total of six failed works, one less than last year. The six failures were due to process failures recorded at these works. This performance equated to an 'amber' classification for the Environment Agency's annual Environmental Performance Assessment (EPA) as our target for treatment works compliance with discharge permits is 100%.

As a result of this and other improvements in the measures submitted for this assessment, we fully expect to receive a two-star EPA rating this year.

We currently have effective monitoring at 88% of our Combined Sewer Overflows (CSOs). The coverage for CSO monitoring is at 98.6%, however, a number of our monitors have not been transmitting correctly. In some instances it is possible to use non EDM telemetry signals to provide us with an alternative method to spot and react to operational alerts. While our target for effective CSO monitoring is

Our operational performance continued

Protecting and improving the environment continued

99%, we are on track to install them on 100% of our CSOs by the end of 2023.

The less water we take from our rivers and reservoirs, the better it is for the wildlife and the biodiversity there. The amount of clean water added to our water distribution network was 566 Ml/d (2021–22: 561.33 Ml/d), falling outside our target of 516 Ml/d. This represents an increase of 1.89% on last year. The freeze-thaw experienced in December has impacted this measure, with increased leakage requiring more water to be put into supply. Changes in customer water use brought on by the pandemic have also continued to have an impact.

In the summer of 2022, river levels were low due to a lack of rainfall and increased water use during the hot weather. We put in place a Temporary Use Ban (TUB) in Hampshire and the Isle of Wight, to reduce customers' water use. The TUB reduced demand in these areas by 5% per day. The effects of the drought lasted beyond the summer, and we requested permission to draw more water from the Rivers Test and Itchen. We aim to take 15 Ml/d less water than allowed by our abstraction licence from these rivers in September – when this performance commitment is measured due to the depth of the river being at its lowest. As a result of the drought, we did not achieve this, with abstraction at -14 Ml/d (2021–22: -16 Ml/d), 11.1 Ml/d below the permitted maximum. This meant we incurred a regulatory penalty of £0.634 million.

We can reduce the overall demand for fresh water by making more effluent available to local authorities, businesses and farmers for re-use. The amount of effluent we have made available for direct re-use has decreased due to a significant reduction in requests for tankered final effluent. We made 82 m^3 available (2021–22: 127 m^3).

Increasing our use of renewables

We are committed to using renewable sources of energy where we can. We generated 13.03% (2021–22: 15.85%) of the energy we use from renewable sources this year, falling below our target of 24%. The percentage of energy produced is affected by the amount of Combined Heat and Power (CHP) generation as well as the amount of overall electricity we use, which varies according to different weather conditions. Our CHP generation reduced due to a number of CHP failures, making the equipment unavailable, and we had to import more electricity than normal due to an increased use of pumps during the wet weather between November and January.

We have undertaken a number of energy efficiency measures, such as sub-metering our bioresources and an additional number of large assets. This enables us to evaluate asset health and look for efficiencies. We have also done some feasibility studies on green hydrogen production, proving that it was not currently commercially viable, and we are looking at a study on heat from boreholes at one of our offices.

We continue to design and develop solar sites, as well as recommissioning existing solar panels. The latest site to use solar power is Peel Common, where we have installed a 0.3MW array on the roof to generate enough electricity to power 5% of the site's needs. We have an additional 11 solar sites being designed and in development for 2023–25.

We met our target of establishing and publishing baseline natural capital accounts for three river catchments. The aim is to better understand the current condition of the environment that we own, or can influence, and the impact of our construction schemes and interventions. Read our natural capital accounts case study on page 31.

We met our target of 100% compliant sludge disposal, maintaining our Biosolids Assurance Scheme certification for a further 12-month period in July 2022. We made good progress on the construction of our first Advanced Anaerobic digestion plant, which will begin to output enhanced quality Biosolid products for the use of farmers in Sussex in 2023. We have also engaged in several constructive mutual sludge capacity trading arrangements with our neighbouring water companies, as part of the Bioresources Market established by Ofwat at PR19.

Our operational performance continued

Protecting and improving the environment continued

Going forward we:

- continue to work with the Environment Agency and colleagues across the industry on changing standards for biosolids recycling under proposed regulatory regime changes (Industrial Emissions Directive, Environmental Permitting Regulations, Appropriate Measures for the Biological Treatment of Wastes) and have increased the size of our Biosolids Compliance team to meet the anticipated challenges of this approach;
- take part in national discussions on the use of Biosolids products and support an approach that maximises net environmental gain; and
- have sought the opinions of farmers in our region about how we can improve the quality and versatility of our products and services.

Improving the health of our assets

We must keep our assets in good working order. During August and September we experienced a number of bursts, recording the highest total of monthly bursts since 2014–15. We recorded 152.8 repairs per 1,000 kilometres of our network (2022: 101.5), falling outside our target of 107.7, incurring a regulatory penalty of £3.8 million. The trend towards an increase in mains repairs was due to increased find and fix leakage activity and the persistent dry weather.

Increasing our activity by detecting leaks proactively means that more leaks, such as mains bursts, can be found, however, this increases the number of leaks overall. An increase in mains bursts was also seen during the extended periods of dry weather, when ground movement affected assets at a time when demand for water was also likely to be higher.

We outperformed the target for the percentage of the region's population at risk from flooding following a one-in-50-year storm, with a level of 11.55% (2022: 11.50%) compared to our target of no more than 12.42%. The percentage is based on modelled predictions for internal hydraulic flooding.

The number of sewer collapses, including mains bursts, was 247 collapses (2021–22: 314). This was an improvement on the previous year, however this was not enough of an improvement to meet our target of no more than 224 collapses.

Managing the amount of surface water entering our sewers

While our performance metric for surface water drainage remains at zero, our Clean Rivers and Seas Task Force is leading a programme to find sustainable solutions to the large amounts of surface water that run off our roads into drains. Work is already underway on six projects using innovative approaches to slow the flow, particularly after heavy rainfall, with the aim of reducing the use of storm overflows when the wastewater system gets overwhelmed. The projects use a variety of sustainable drainage solutions – or SuDS – including the use of water butts, planters (household and non-household), resolving misconnections and roadside schemes. Read more on page 68.

A look ahead – our Turnaround Plan

We are committed to improving our waste and environmental performance. By 2025 we aim to have been awarded a three-star performance rating from the Environment Agency. We will achieve this by:

- Building capacity and resilience at our wastewater treatment works to reach 99%+ compliance with treatment and permit standards. This means making sure our pumping stations and networks continue to operate effectively as our climate changes.
- Making sure our assets work to capacity. Updating our maintenance standards and proactive control to stop assets failing, and an improved emergency response.
- Digitalising our sewer network to reduce pollutions and flooding, using industry-leading monitors, artificial intelligence for prediction and maintenance.
- Improving training, development and productivity by upskilling our front-line colleagues. Making sure they are multi-skilled and externally accredited to deliver the service our customers expect.

Our operational performance continued

Our environmental disclosures

A joint project is helping schools to slow the flow of surface water. The project is funded by Southern Water and the Department for Education and aims to stop localised flooding after heavy rainfall. Nearly 50 schools are taking part across Hampshire, the Isle of Wight, Sussex and Kent. By installing water slowing technology for classroom roofs and playgrounds, excess rainwater run-off from hard surfaces can be kept from filling the sewage system too quickly. Rain gardens and rain planters will also be installed.

Increasing our focus on compliance

Our Environmental Management System is our most effective tool for managing environmental risk and is monitored throughout the year to flag compliance and performance risks. The system continues to be certified to the ISO 14001 standard and remains a successful mitigation for compliance risks in relation to waste management and control, pollution prevention, water quality, water resources, consumables (energy and chemicals), customer nuisance concerns, amenity, and global biodiversity.

Our environment policy reflects our environmental ambitions. As we rebuild trust and can evidence that compliance is just part of the way we work, we can focus more attention on our environmental performance improvement programmes.

Working to improve water quality by taking a Catchment First approach

The water reaching customers' taps continues to meet the Drinking Water Inspectorate's (DWI) stringent water quality tests, with 99.97% (2022: 99.97%) of samples meeting all the necessary standards. Our target was to achieve 100% compliance.

One of our key tasks is understanding our catchments and knowing what is happening near our drinking water abstraction points. This information helps us understand our catchments and who we need to work with to manage current and future risks to protect our drinking water quality.

To do this we carry out extensive monitoring of the environment and our water supplies. We monitor water quality at treatment works, treated water storage facilities and customers' taps, as well as in the water environment. Using this information, we create action plans to target problems that we identify. We work closely with the Environment Agency and the Drinking Water Inspectorate to make sure customers and the environment are protected.

Our Catchment First programme puts land management at the heart of our decision-making and takes a collaborative approach to delivering long-term resilience. By looking at problems with a wider catchment-area focus we are developing truly sustainable solutions with local landowners, farmers and Wildlife Trusts, Rivers Trusts and Catchment Partnerships.

The programme includes a range of actions we committed to take as part of the Water Industry National Environment Programme (WINEP) alongside further voluntary actions following environmental best practice. We can only influence land uses and activities in our drinking water catchments by working in partnership with those who manage the land, such as farmers, industry and domestic households.

In our investigations we look for activities that could affect nearby water sources – for example, pesticides used on certain crops, livestock grazing, muck spreading and manure heaps, golf courses, industrial sites, old and active landfills, car washes, allotments – anything that has the potential to pose a risk.

To reduce the risk of nitrates and pesticides reaching our drinking water abstractions, we are working in partnership with farmers and land managers and engaging with several farmer clusters across our supply area. We are also working with Local Authorities and Highways Agency to understand road run off and using Sustainable Drainage Solutions.

Boosting biodiversity across our region

One of the key outcomes of our Environment Strategy is to improve biodiversity. In partnership with regional Wildlife Trusts, this year we completed a desktop review of our own sites.

Our operational performance continued

Our environmental disclosures continued

It looked at their current biodiversity value and helped us identify opportunities to deliver biodiversity and increase the capture of carbon dioxide. We will do this by restoring and creating habitats and connecting our sites with areas of importance for wildlife.

As part of this review, we launched our Biodiversity toolkit for our operational teams to encourage them to make small, practical changes on our sites to benefit the ecosystems around us. This toolkit, which includes advice on everything from dealing with invasive non-native species to installing bird boxes and feeders, was developed by our team of Environmental Champions.

With a wide breadth of knowledge of the water industry, our champions are now responsible for helping to:

- raise awareness and understanding of our environmental obligations and the regulations that dictate them
- assist in supporting and continuously improving our ISO 14001 Certified Environmental Management System
- support our commitment to the Environment Agency under the Water Industry National Environment Plan (WINEP) in areas such as invasive non-native species management, biosecurity and protected species awareness;
- deliver, track and monitor biodiversity enhancements across our operational area;
- help ensure our contractors are environmentally focused and working in line with our environmental expectations; and
- create a workplace that is beneficial for our mental health and wellbeing.

To increase biodiversity, we are developing a biodiversity net gain strategy, which will help us to understand and plan how we can deliver at least 10% biodiversity net gain on all new developments (Environment Act 2021). We have used our Water for Life – Hampshire programme to understand how we can meet our needs and also work with farmers and environmental NGOs on third-party land.

Our capital delivery programme must include mitigation and compensation for any unavoidable impacts on the environment, including local wildlife and habitats. In December, with our partners CMDP, we received a Gold Level award for Environmental Best Practice in the Utilities: Habitat category at the 2022 Green Apple Awards. It focused on work done to upgrade Hailsham South Wastewater Treatment Works where we improved the wildlife value of three lagoons that were due to be decommissioned.

We met our target of establishing and publishing baseline natural capital accounts for three river catchments. The aim is to better understand the current condition of the environment that we own, or can influence, and the impact of its interventions. Read our natural capital accounts case study on page 31.

We are moving towards using more nature-based solutions as part of our treatment and pollution reduction programmes. A new integrated wetland is being designed for Staplefield wastewater treatment works to help reduce nutrients (phosphate) entering the river there – this solution will deliver benefits for nature and has a lower carbon cost than traditional treatment solutions.

At Lukely Brook on the Isle of Wight we have restored the river, which had previously been moved and straightened to make space for agriculture – the work followed an initial investigation which showed our groundwater abstractions in the area were potentially impacting on the river.

This restoration returns the river to a more naturally functioning system, more resilient to low flows and drought. A number of our treatment works have old reedbed systems that we are restoring and bringing back into use as part of our wastewater treatment process to reduce nutrients and to help manage storm overflows, for example at our Lavant treatment works.

CASE STUDY

Protecting and improving our environment

Together we can improve our harbours

"Forming part of our wider environmental programme (WINEP), we're investing £72 million to 2025 to upgrade the seven largest wastewater treatment works that release into Chichester, Langstone and Pagham harbours and nearby rivers that flow into them.

"Feeding into the wider Solent, these harbours have a high environmental importance, containing a diverse range of habitats, designated shellfish waters, SSSIs, SACs, SPAs, Ramsar sites and an Area of Outstanding Natural Beauty, among others. The area also contains groundwater sources used by Portsmouth Water to supply drinking water.

"Right now, Natural England has assessed the nature in some areas to be in an unfavourable or declining position, and we want to help to reverse this working with key partners in the area whose activities also have an impact on water quality. To do this we've supported the creation of a Three Harbours Project Development Manager, who reports into a collaborative Technical Working Group. This group is developing an integrated long-term plan to improve water quality, enhance natural capital, increase biodiversity and restore and connect these important habitats.

"Alongside more traditional solutions, we're working on a series of catchment and nature-based projects. Over the past year we've worked with 12 farms in the Chichester Harbour area, planting 800 hectares of overwinter cover crops and completing soil surveys in over 25 fields. This has achieved an estimated reduction in nitrogen losses to the harbour of approximately 20,000kg this year.

"Alongside this we've supported conservation planning advice on three farms and awarded farm capital grants on four farms supporting the costs of new equipment to improve the efficient use of fertiliser in areas that may impact on the harbour.

"We have also launched our new Community Conservation Grant for the harbours and in our first year we've made awards to Stansted Park Estate to plant a large area of woodland, the Manhood Wildlife and Heritage Group to plant hedgerows supporting habitat connectivity; and we've also contributed to the cost of a public access improvement project proposed by the RSPB.

"To better understand water quality issues and where they come from, we're funding a three-year PhD with the University of Brighton looking at the sources of nutrients and faecal coliforms within the harbours. By sampling our assets and the harbours and rivers draining into them, we hope to better understand where pollutants are coming from – e.g. from Southern Water or private discharges, from recreational activities, from farm animals or from wildlife. The PhD started in 2022 and will complete in 2025, but we'll use interim results to inform our work.

"Looking forwards we are taking a more holistic approach to our wastewater planning and have worked with partners to develop our plans for investment for 2025–30. Our Clean Rivers and Seas Task Force is looking to create integrated constructed wetlands at several sites to improve the quality of the water that is released and manage flows into the harbour where groundwater infiltration into our sewers is causing frequent spills. We are also planning to continue our work with farmers to deliver water quality and biodiversity benefits."

Kate Rice – Natural Capital Strategy Manager

CASE STUDY

Protecting and improving our environment

Taking a local approach to **reducing storm overflows**

"Finding sustainable drainage solutions (SuDS) that will work in the local community is a team effort. We want to explore innovative, nature-based and engineered solutions to slow the flow of surface water, and SuDS can be a great solution.

"Our Clean Rivers and Seas Task Force is working with partners and stakeholders from a range of sectors to trial six 'Pathfinder' projects across Kent, Hampshire, the Isle of Wight and Sussex. One of the six projects is in Cornwallis Circle in Canterbury, Kent.

"At the moment, this is an area where 74 hectares of the surface is non-permeable, which means rainwater can't soak into the ground, and it just runs off into the drains. During a typical 10mm storm, for every one hectare of non-permeable area, we'll see around 100,000 litres of run off. That's a lot of water!

"Working with Canterbury City Council and Kent County Council, we have been able to start developing a scheme to manage the area and install SuDS. The scheme aims to adapt the area into parkland supporting the wellbeing of the local community and wildlife, with easy accessibility and beautiful plants for everyone to enjoy.

"Designs are being prepared for public consultation before the scheme is implemented. This will be one scheme of many across the town.

"It's a good example of how the partnerships we have been putting in place can have a positive impact on the whole community."

Nicole McNab – Strategic Communications and Partnership Delivery Lead

Our operational performance continued

Enabling and empowering **our people**

The health, safety, security and wellbeing of our colleagues is a necessity

We want to make sure everyone puts health, safety, security and wellbeing at the forefront of everything we do. This will require a cultural shift in how we behave across the business and is a key outcome for the Health and Safety Transformation Programme. Our new company value – Working with Care – supports this cultural shift and goes hand in hand with the programme to make sure safety is, and remains, a core focus for us all. To embed this new value, we created an engaging internal communications campaign, which was rolled out from April 2023.

Over the past year, our strategic Health and Safety Transformation Programme has been gathering pace, with some elements already being delivered by our operational teams. The programme covers six broad areas:

- An updated Health and Safety Management System – All the guidance and documentation to keep our teams healthy and safe while at work. From procedures and processes built with our own subject matter experts to golden rules and life-saving habits for all our colleagues and supply chain partners.
- A new Health and Safety data system – Making reporting of accidents, near misses and observations easier than ever. Harnessing the power of this live data enables us to share best practice, monitor and mitigate risk and learn together.
- An enhanced Health, Safety, Security and Wellbeing team – Growing the team to ensure we have the right people in the right place to make these changes last and to support our new approach.
- Improved Health and Safety training – From an immersive state of the art behavioural training experience for all our colleagues including our supply chain to refresh our safety culture, to professional and recognised qualifications in workplace safety for our leaders – we are investing in our people at every level and across the business.
- Latest equipment and digital tools – We are investing in tools that make the steps to good safety simple, quick and accessible. We have a suite of tools and resources to support every colleague from the frontline to our offices. These include artificial intelligence learning support with risk assessments and work activities, to gas detector and lone working equipment with added security features. All colleagues will have easy access to a wealth of health and safety information on our new Health and Safety Hub.
- Internal and external communication – Safety is our priority and we want to talk about it. From the lessons learned to proactive support, learning and sharing of best practice, knowing what good looks like and starting every meeting with a safety moment. Good communication is key to embedding this culture change.

The transformation programme is already beginning to deliver and some of the early work on putting safety first and training our staff is beginning to yield positive results.

A key measure of our progress has been a reduction across the business of over 20% in our Lost Time Injury Accident Frequency Rate. This is a comparison of the number of accidents, which result in staff being off work with the number of hours worked. In the past 12 months we have seen this drop from 0.39 to 0.30, exceeding our initial target. Some of the projects or initiatives that have contributed to this change include our Point of Work Risk Assessment, our Site Standards scheme and the new Safety Reporting system.

Security and wellbeing are also very important to the business. We have already conducted a strategic review of wellbeing and are in the process of building both the Wellbeing and Security teams. A security review will be conducted early in this financial year, following the full review of our security infrastructure conducted in March 2023. The team have already begun to develop security golden rules and best practice guides.

We recognise the importance of the wellbeing of each and every one of our team members. It is why we have resources like our Employee Assistance Programme, Unmind, the Bupa Health Cash Plan

Our operational performance continued

Enabling and empowering **our people** continued

and guidance we share throughout the year to get those important conversations started.

Focusing on diversity and inclusion

We want to provide an inclusive workplace for everyone to bring their best and authentic selves to work every day. For the third year in a row, we have been ranked in the Top 50 Inclusive Companies, progressing to 44th place this year. This improvement in our ranking shows our continued commitment to Equality, Diversity and Inclusion (ED&I).

With our drive to welcome diversity and encourage inclusion we have also launched mandatory inclusion training for all colleagues, helping them to understand how to create a culture of inclusion in the workplace.

Making sure we have an inclusive culture includes our recruitment processes. We want to make sure that our approach to diversity and inclusion is visible from the moment that people consider our company as a possible employer, and once an offer to join us is accepted, new joiners are sent an induction pack that contains information about our values, our approach to ED&I and references to our key policies.

With the aim of being free from bias, we introduced a 'Licence to Hire' for all hiring managers so that we are embracing a diverse workforce that is reflective of the communities that we serve. We are also working to make diverse interview panels a business-as-usual approach.

To support to colleagues, we now have five employee resource groups and are planning more. The new Menopause group joins our four existing support groups: LGBTQ+, Neurodiversity, Women's Network and Working Parents. The groups hold activities, not just for the rising number of colleagues joining them, but for the whole company to take part in, with motivational speakers and partnerships.

Our LGBTQ+ group welcomed comedian Zoe Lyons and hosted a drag queen fundraiser with Ophelia Payne for Mindout. We were pleased to welcome a guest speaker during Pride month talking about their experience of becoming transgender and we celebrated National Inclusion week with a range of guest speakers. The Menopause group organised a company-wide webinar, partnering with Talking Menopause and our Neurodiversity group hosted a motivational speaker sharing her experience as a neurodiverse wheelchair user.

In line with our pledge, signed to support colleagues experiencing the menopause, a support group has been set up to provide a resource for colleagues and managers. We will also be rolling out our allyship and banter awareness training to our management community.

Our Gender Pay Gap Report (**southernwater.co.uk/our-performance/reports/gender-pay-gap-reports**) shows that the median pay gap remains in favour of female employees at -3.32%, and the bonus gap has seen a reduction from 16.1% to 14.95% in favour of male employees.

Our ambition is to make sure that by 2030, 35% of our workforce are women, 35% of our managers are women and 11% of our workforce are from a minority ethnic background. This year we welcomed seven graduates onto our Management Graduate programme, with a gender ratio of 37% women. As part of our celebrations for International Women's Day and continuing to build our Gender Action Plan, we launched a partnership with Women on Boards, which aims to help shape the future Board members' careers.

We are developing talent

We are committed to empowering our colleagues with Learning and Development opportunities that help people improve their skills and gain new knowledge and insights. Over the past year, we spent £1.5 million on structured training and development offerings for our colleagues. Our colleagues also have access to mentors, on the job training and opportunities to work on different projects or tasks that will help them to expand their skills.

The percentage of our employees currently being supported to take advantage of both formal and informal learning has increased by 3% to 21%. We also offer people access to 50 different apprenticeship standards, that cover both entry level and upskilling qualifications. Last year, we saw 166 of our people studying an apprenticeship standard. We

Our operational performance continued

Enabling and empowering our people continued

had 285 colleagues undertaking informal training and 111 colleagues taking formal training.

We introduced our new Inspire Leadership Programme for frontline, middle and senior managers this year and welcomed seven graduates onto our Management Graduate programme.

A great place to work

We want all our colleagues to be able to bring their best selves to work, so equality, diversity and inclusion (ED&I) are key. Creating and maintaining this positive culture and mindset means making sure colleagues see our company as a great place to work where they feel they belong and are able to be their authentic selves at work.

We measure engagement among our colleagues using regular engagement polls and pulse surveys. We had a 79% response rate for the latest annual engagement survey with 62% of colleagues rating their satisfaction at four or five, out of five. Our strongest result was 'My manager cares about my wellbeing' which was at 4.31 out of five, showing that our colleagues feel cared for. We share the results with our colleagues and use the scores to encourage teams to address any particular issues.

As for the day-to-day engagement, flexible working practices have now been embedded in the company, helping with work-life balance. Our Stars recognition scheme continues to acknowledge and reward colleagues for their hard work, culminating in an Annual Star Awards event, with prizes given in a variety of areas including Helping the Community and Succeeding Together.

Meeting the needs of our supply chain partners

We recognise the importance and reliance we have on our supply chain in terms of innovation, water security, managing risks, corporate and social responsibility, and operational efficiency. Our partners act as the face of our business for many customers and communities. It is vital that we foster, cultivate and nurture the relationships we have with them, so they remain connected to, and understand, our business priorities and culture.

As part of our strategy to enable this, we have developed a Supplier Relationship Management (SRM) Framework, the goal of which is to foster an environment in which we work in collaboration, build trust, encouraging open and honest communication. We want to be seen as a client of choice through our practices and behaviours, consistently positioning ourselves to receive preferential access to resources, ideas and the latest innovations.

The framework is organised around a set of design principles, informed by British Water Survey results. It includes a more detailed management diagnostic, an internal review of our supplier enablement capability and an independent assessment through a 'Voice of the Supply Chain' exercise. Principles include:

- Creating a system of governance to make sure there is regular engagement between all stakeholders.
- Providing an environment where constructive 360-degree feedback is gathered and shared.
- Promoting excellence by highlighting new areas of value and introduction of new initiatives.
- Recognising contributions and celebrating success.

Elements of the framework exist, having been rolled out as part of our current procurement programme. New framework elements will be rolled out during the remainder of this five-year investment period to allow content to mature and develop ahead of the next (2025–30). These "new" elements include:

- Performance benchmarks using a consistent set of metrics.
- Joint business plans to underpin engagement.
- Supplier Awards Programme to recognise success.
- Creation of open collaboration forums to better direct and harness our partners' creative efforts.

Our operational performance continued

Enabling and empowering our people continued

Volunteering

All our employees have the opportunity to use two of their working days per year to volunteer in the local community. A total of 2,534 hours of employee volunteering took place within the year (2022: 1,438) and this included our teams' manning roadshows and working with charity partners across our region.

Our team of Community Ambassadors aim to support communities proactively and be visible and available to answer any questions they might have about our sites and networks, sustainable water use, leakage or problems with their bills or making payments. They also promote our priority services to those who might need to join our register. Over the past year, our ambassadors have engaged with almost 8,000 customers at 28 locations across the South East.

As part of our volunteering programmes this year teams have supported:

- Tree planting at Brooklands park and lake in Lancing and Cliff Gardens Seaford community partnership in Seaford.
- Wetlands restoration in partnership with Kent Wildlife Trust and South East Rivers.
- Removing invasive species habitat maintenance at Pagham harbour with RSPB.
- Helping with building renovation for Turning Tides who help fight homelessness.
- An army of volunteers were out collecting litter from five beaches on the Isle of Sheppey by supporting the Sheerness town team.

A look ahead – our Turnaround Plan

We are committed to creating a safe working environment with empowered and supported colleagues. By 2025 we aim to have achieved a 0.2 lost-time injury rate. We will have achieved this by:

- Improving the safety of our colleagues with the introduction of a new mobile risk safety app.
- Working with care to embed health and safety as a key way of working with upskilling, training and onboarding programmes.
- Managing our compliance through new systems, inspections and assurance.
- Supporting our colleagues to achieve our commitments through our Inspire Academy, internships and a graduate programme to make sure we upskill and develop each individual.

CASE STUDY

Enabling and empowering our people

Using immersive experiences to provide **groundbreaking** health and safety training

"We're working on a new way to offer health and safety training, through an immersive experience that means you can observe and practice challenging safety behaviours in a realistic environment.

"My work in the Health and Safety Transformation Programme team has given me the chance to experience it first-hand. It allows you to be part of realistic environments and characters, and group workshops where safety-related behaviour is discussed and applied.

"It's really something different. When you take part, you get a greater understanding of how external factors can affect how switched on someone is for work on any particular day. Also how team members with a singular rather than holistic view can multiply the pressures to deliver at any cost. It's so realistic as you get the chance to interact with the characters advising them on the right course of action to take.

"In the workshops you can explore how everybody's behaviours and actions affect the outcomes of events and you are given a selection of tools to instil good safety culture and behaviour in yourself and others, making everyone a safety leader

"Finally, you get to apply these methods, seemingly in the real-world. The realism of the experience and the opportunity to make a tangible difference to a series of events was very powerful.

"We're all stakeholders in safety, so this training will be delivered to all of our colleagues and our supply chain partners.

"The ultimate goal of our Health, Safety, Security and Wellbeing team is to help make sure we all get home safe and well at the end of the day. And this training is about giving our colleagues a first-hand experience of how everybody's actions can affect safety at work and home, as well as helping to give them the tools to contribute to continuously developing a safety culture in all corners of the business."

James Hills – Health, Safety, Security and Wellbeing Assurance Adviser

CASE STUDY

Enabling and empowering our people

A **Women's Network** for everyone

"Our Women's Network is a place where colleagues can talk openly, build relationships, and are listened to. All gender identities are welcome to join, and we want to reach as many colleagues as possible through our regular meetings and online Teams channel.

"One of the main aims of our network is to help members develop their skills. Whether they're building confidence, gaining more presence in meetings or doing self-defence, it's important for our colleagues to have a space where they feel comfortable to develop themselves and talk to other like-minded individuals.

"When I became Chair of the Women's network in 2022, I was keen that members could take part to develop relationships, boost their confidence and develop their skills. We put together a programme of activities including guest speakers, and we decided to hold our first Women's Network conference in April 2023.

"At the conference, over 100 of our members joined us to network at the market stalls, where themes such as women's health and nutrition were discussed. There were also inspirational speakers and a panel discussion on 'how to attract women to a male dominated industry'.

"With over two hundred members and growing, it's great to see this network thriving and supporting colleagues from across the business."

Cath Jeffery – Head of HR

Our operational performance continued

Our approach to climate change

As we have already highlighted in this report, climate change impacts, amplified by population growth present huge challenges, particularly in the South East. This is why they are both listed as principal risks to our ability to operate. Mitigating their impacts will make sure that we are able to maintain high-quality, resilient services for our customers in the future.

An increase in the frequency of drought is one negative impact of climate change we are already experiencing. The beginning of 2022 was one of the driest years on record (for the past 131 years), and river flows were approximately 25% lower than they should have been. As a result, in Summer 2022 we introduced drought restrictions across part of our region, in Hampshire and on the Isle of Wight. A Temporary Use Ban was in place from 5 August 2022 to 4 November 2022. Our Drought Plan sets out how we would deal with a drought in our region and is regularly updated to make sure that we can maintain supplies of drinking water to our customers while minimising the impact on our rivers and the environment during drought events.

In 2023 we are voluntarily adopting the Task Force for Climate-related Financial Disclosures (TCFD) reporting recommendations and Guidance for All Sectors for UK large private companies and have enhanced our disclosure on the risks that climate change poses to our business.

The following sections address how we incorporate climate change into our governance processes, the potential impact on our business model, strategy and financial planning, the risk management processes, and the climate-related metrics and targets we use. The sections and subsection headings correspond to the four thematic areas and 11 recommendations of the TCFD framework. Given its complexity, and to aid readers of the accounts, at the end of each section we provide links to further disclosures that can be found separately on our website.

Our operational performance continued

TCFD index table:

Recommendation	Recommended disclosures	Disclosure level	Reference (Annual Report)	Reference (other reports)
1. Governance Disclose the organisation's governance around climate-related risks and opportunities.	a) Describe the board's oversight of climate-related risks and opportunities.	Full	Strategic Report • Our approach to climate change: Governance, pages 77 to 79. • Engagement with stakeholders, pages 33 to 39. Financial performance • Risk oversight and governance, pages 122 to 123. Governance • Remuneration policy, applicable in year (unaudited), pages 189 to 201.	
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	Full		
2. Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	Partial	Strategic Report • Our approach to climate change: Strategy, pages 79 to 84.	Net Zero Plan Climate Change Adaptation Report, 2021 Long-Term Priorities Draft Water Resources Management Plan Drainage and Wastewater Management Plan
	b) Describe the impact of climate-related risks and opportunities on the organisation's business, strategy, and financial planning.	Partial		
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a two degree or lower scenario.	Partial		
3. Risk management Disclose how the company identifies, assesses, and manages climate-related risks.	a) Describe the organisation's processes for identifying and assessing climate-related risks.	Full	Strategic Report • Our approach to climate change: Risk management, pages 85 to 86. Financial performance • Risk management approach, pages 120 to 121.	Draft Water Resources Management Plan Drainage and Wastewater Management Plan Drought Plan Climate Change Adaptation Report, 2021
	b) Describe the organisation's processes for managing climate-related risks.	Full		
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	Full		
4. Metrics and targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	Partial	Strategic Report Our approach to climate change: Metrics and targets, pages 87 to 92. Streamlined Energy and Carbon Report (SECR), pages 93 to 95. Our operational performance, pages 42 to 95.	Annual Performance Report, 2023 Net Zero Plan Sustainable Bond Impact Report 2022
	b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Full		
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	Full		

Our operational performance continued

Our approach to climate change continued

Governance

TCFD recommendations: disclose the organisation's governance around climate-related risks and opportunities:

A. Describe the Board's oversight of climate-related risks and opportunities.

B. Describe management's role in assessing and managing climate-related risks and opportunities.

Board oversight

Our Board has ultimate oversight of our consideration of climate-related risks and opportunities and scrutiny of management's identification, assessment and management of these risks and opportunities. Our principal risks statement includes climate change, and the Board reviews this annually. It considers climate-related issues when reviewing our plans, risk profile and principal risks and performance. This year the Board was updated on climate-related issues at least twice during the year, regarding our Water Resource Management Plan (WRMP) and Drainage and Wastewater Management Plan (DWMP), and climate-related Outcome Delivery Incentives (ODIs) and performance commitments.

The Board approves governance arrangements for climate-related issues, including delegating to committees specifically discussing them. This includes the Audit Committee and the ESG Committee. The Audit Committee meets quarterly to maintain oversight of our reporting, internal controls and management system, and compliance. It discussed climate change-related issues concerning our regulators views on, and assurance of our WRMP and DWMP during the year.

The ESG Committee meets quarterly to support delivery of our ambitions, performance and plans related to material ESG matters. Climate change has been one of four focus areas during the past year, and the committee has discussed climate change matters, including our net zero carbon progress, climate adaptation activities, and natural capital on four occasions.

Executive management

Executive management, and its Executive Committee have day-to-day accountability for climate-related issues. The executive is supported by an Environment Steering Group. This was established during 2022 and is sponsored by executive members. Its purpose is to facilitate an effective response and deliver solutions to environmental matters across the business. Members include cross-function representatives from across the business, including executive management, asset strategy, and catchment management. This Steering Group is supported by an Environmental Working Group.

We engage with customers and stakeholders to understand their expectations on climate-related issues. This includes discussing our plans with members of our Independent Climate and Environment Group (ICEG) established in 2022, and our Customer and Communities Challenge Group (CCCG). These Groups also provide feedback to the executive and to the Board's ESG Committee.

Our operational performance continued

Climate-related governance framework:

Board of Directors			
Board delegates certain responsibilities to its committees.			
Audit Committee	**Nomination Committee**	**Remuneration Committee**	**ESG Committee**
Executive Committee (ExCo)			
Day-to-day running of our company by our executives, including matters related to ESG. The executive delegates oversight of certain climate-related matters to its committees.			
Risk Committee	**Performance Committee**	**Investment Committee**	**Environment Steering Group**
Independent stakeholder groups			
Independent Climate and Environment Group		**Customer and Communities Challenge Group**	

The Investment Committee, chaired by our Chief Finance Officer, considers climate-related matters as part of its decision making. During the year carbon risks, opportunities and values were embedded into our Risk and Value business planning process.

The Risk and Value (R&V) process is designed with the intention of delivering the best value for money for Totex (total expenditure) and whole-life cost (WLC). The R&V process is six stages; checkpoints that act as technical milestones to support investment decision points within our Asset Lifecycle Process (ALP). The ALP is the sequence of stages that our assets go through during their lifetime. The forecast operational and embedded carbon emissions of a potential investment project have been embedded in the R&V project scorecard and are used to inform investment decision-making. For more see our business model, page 22.

Climate-related risks are also considered by the Executive Risk Committee, which consists of our executive and cross-function senior management representation and is chaired by our General Counsel. Each directorate maintains a risk profile, which is reviewed quarterly by the Executive Risk Committee. The committee reviews climate change risks as part of its quarterly review as part of our ERM radar.

Identified climate-related risks are incorporated in our enterprise risk profile and managed by appropriate business areas. Progress against our net zero target is reported to the Environment Steering Group and Executive Committee. Climate-related disclosures in our annual report are reviewed by the ESG Committee and require approval of the Audit Committee.

Climate-related issues are documented in several of our regulatory plans including our DWMP, WRMP and operational resilience plans. These plans are considered by the PR24 Committee, which consists of our executive and cross-function senior managers and is chaired by our Chief Financial Officer.

Senior management and employees are incentivised to deliver on our ambitions in relation to climate-related issues. Objectives are applicable to all employees including executive management and are based on a range of stretch targets, with performance-related remuneration measures focused on climate-related matters including leakage, flooding and pollution incidents. Progress against these measures is monitored by the Performance Committee.

Our operational performance continued

For more information:

On how we engage with stakeholders, pages 33 to 39.

On the governance of enterprise risks, pages 120 to 132.

On the sustainability and climate-related discussions held at Board and its committees, pages 157 to 159 and 179 to 180.

On our performance targets for this year and how they relate to directors' remuneration, pages 184 to 201.

Next steps

We will review governance of climate-related matters across the business, including expanding our risk and value process to consider carbon across all the gateways of our investment decision-making process.

Strategy

TCFD Recommendations: Disclose the actual and potential impacts of climate-related risks and opportunities in the organisation's business, strategy, and financial planning, where such information is material.

A. Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.

B. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

C. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Overview of our approach

Our climate-related strategy has two approaches: mitigation aims to reduce the causes of climate change, while adaptation involves adjusting our decisions and activities to the changing climate.

Mitigating the causes of climate change: We have responded to the climate emergency by committing to reach the industry target of net zero carbon for the emissions associated with operating our services by 2030. We see this as an interim target on the path to achieving net zero emissions by 2050, aligned with the government's target. See page 89 for more on our net zero roadmap.

Adapting to a changing climate: Mitigation alone will not ensure resilience to the physical changes that will occur from the predicted future of warmer, wetter winters and hotter, drier summers. Even if the Paris Commitment goals of limiting global temperature increase to 1.5 degrees centigrade is met, we will face further changes to our climate to 2050 and beyond. We have continued to assess the resilience of our services to our changing climate, following publication in 2021 of our third risk assessment report to the Department for Environment, Food and Rural Affairs (Defra).

Read our Climate Adaptation Report at: **southernwater.co.uk/our-performance/reports/climate-adaptation-consultation**.

Our existing plans looking at the long-term impacts of climate change include our Resilience Action Plan, WRMP, Drought Plan, and DWMP. These plans consider a range of short and long-term time horizons. These reports are available on our website. As part of our business planning for 2025–30 we are reviewing these plans, and the underlying assessments and assumptions made.

We are working to understand how we, as a landowner, can maximise opportunities to mitigate climate change and encourage stakeholders to do likewise. Our strategic land management plan is seeking to consider the multiple potential benefits from how we use the relatively limited land we own, such as carbon sequestration, biodiversity and natural capital and ensuring the future operational resilience of services to our customers. We have also considered how our sites connect with other sites and habitats within the landscape, to enable habitats and species to better adapt to climate change.

Our operational performance continued

Our climate-related risks and opportunities

We have identified climate change as one our principal risks and apply an ongoing, iterative process to assess and manage the range of risks and opportunities. These are typically considered as part of a broader range of factors, to understand how they interconnect and impact our business.

We consider a variety of time horizons as part of our climate-related risk assessment processes, and these broadly align with our planning horizons. See the table below, and read more on page 32.

In addition to climate change itself being identified as one of our principal risks, it also has the potential to impact several of our other key risks. Most notably these are: our ability to provide customers with access to a supply of high-quality drinking water, now and in the future, and ensuring the capacity and resilience of our wastewater assets to effectively remove and treat wastewater.

The following tables summarise our climate-related key risks and opportunities and refers to published documents that contain more detail on our climate change processes and management plans, including risk assessments. There has been no material impact identified on the financial reporting judgments and estimates. It is expected that any impact identified through our business planning processes would materialise over a longer period of time, rather than a single year, no impact from this was identified in the current year. See page 228 in the Financial Statements for more on climate change financial considerations. For more on our approach to identify and manage risks, see pages 120 to 132.

Broad planning horizons			Time horizons of our specific plans
Short term	One to two years	Imminent risks requiring a tactical response.	Operational resilience plans: 70 years Water Resource Management Plan: 50 years Drainage and Wastewater Management Plan: 25+ years Drought Plan: Five years Pollution Incident Reduction Plan: One year
Medium term	Five years+	The five-year business planning cycle set by our regulator, Ofwat.	
Long term	25 years+	Risks related to our longer-term priorities and strategy.	

Our operational performance continued

Our approach to climate change continued

Acute and chronic physical risks and opportunities	Drivers of risks and opportunities	Potential impacts on our business	How we are managing and mitigating the risks
Ability to provide customers with access to a supply of high-quality drinking water now and in the future	**Short to medium term:** Reduced water availability and higher demand due to chronic higher temperatures, with drier and hotter summers, and an increased frequency of drought. **Medium to long term:** Impacts on infrastructure and increased risks of contamination due to increase in number and severity of storms and floods.	Accelerated asset deterioration. Supply of water fails to meet demand. Financial penalty and reward position. Further investment in infrastructure and incident management.	• Comprehensive modelling and short- and long-term plans feed into our five-year asset management plans and capital investment programme: • Water Resources Management Plan (WRMP) forecasts how much water we will need in the future and proposes options to make sure we have enough. • Operational resilience framework and action planning to improve asset, system and service resilience and organisational capability monitoring. • Drought Plan outlines the steps we would take to make sure we can maintain supplies of drinking water to customers during drought events. • Water for Life Hampshire Phase 2 plan – a Strategic Resource Option (SRO) in our Western Area. • Incident preparedness and management planning to provide a continuous service to customers. • Target 100 water-saving customer engagement programme to encourage reductions in demand. • Increasing catchment resilience by working with farmers to protect and enhance natural capital and deliver a range of ecosystem services, including improved water quality.
Ability to ensure the capacity and resilience of our wastewater assets to effectively remove and treat wastewater.	**Short to medium term:** Increase in volumes of water entering the system due to increased intensity and frequency of storms. Drought/reduction in rainfall and temperature increase the risk of blockages and internal and external flooding. **Long term:** Increase in sea level and risk of river flooding of assets.	Accelerated asset deterioration. Financial penalty and reward position. Further investment in infrastructure and incident management. Pollution event fines or other penalties.	• Comprehensive business plans, including DWMP and operational resilience planning that feed into our business plans and capital investment programme. • Drainage and Wastewater Management Plan (DWMP) assesses and plans for future investment needs across our region, 11 river basin catchments, and 61 of the highest risk of our 381 wastewater systems. • Pollution Incident Reduction Plan details programme of activities to reduce pollution incidents to zero by 2040, including adapting to changing weather patterns. • Incident preparedness and management planning to provide a continuous service to customers and protect the environment. • Clean Rivers and Seas Task Force driving Pathfinder projects to manage surface water flooding and reduce storm overflow releases, including sustainable drainage systems SuDS and wetlands.
Ability to protect and enhance natural capital across our region.	**Medium to long term:** Increased run-off and higher volumes of water, leading to pollution of rivers and seas. Drought/reductions in water leading to impacts on habitats and species.	Financial penalty and reward position. Pollution event fines or other penalties. Stakeholder expectations not met. Less resilient assets.	• Programme engaging with farmers and other stakeholders to improve the water sources we rely on. • Ecologists within business focused on opportunities to enhance biodiversity and comply with Biodiversity Net Gain. • Measuring and evaluating our natural assets by catchment to understand the state of our land and water sites and help prioritise improvements. First three baseline accounts published, • Draft WRMP adaptive planning approach represented a range of future scenarios. Environmental assessment included biodiversity net gain and natural capital. Options included nature-based solutions. • Our plans under the Water Industry National Environment Programme (WINEP) for water and wastewater, including increasing focus on catchment and nature-based solutions.

Our operational performance continued

Transition risks (by TCFD risk type)	Risk description	Potential impacts on business	How we are managing and mitigating the risks
Policy and Legal	**Medium to long term:** Changing public sentiment driving changes in regulatory targets, permits, licenses, and enforcements, leading to increased non-compliance.	Financial penalty and reward position. Increased risk of fines from non-compliance. Increased cost of carbon emissions, such as a carbon tax.	• Strong engagement programme with regulators, MPs, and other stakeholders. • Engagement with our partners and supply chain to support delivery of our ambitions. • Governance framework including policies and risk management, that document accountabilities, processes and policies to aid decision making during business planning and delivery.
Technology	**Medium to long term:** Emerging technologies, creating operational risks including changes to skills required and operational ways of working.	Investment in new technologies, skills enhancement and new ways of working.	• Bluewave. Our research, innovation and development lab. • Engagement with our partners and supply chain to support delivery of our ambitions. • Work includes pilots for the monitoring and extraction of process carbon emissions.
Market	**Medium to long term:** Changes in energy market and management, including cost increases, additional taxation, decarbonisation of fuel sources.	Increased costs. Increased focus on self-generation. Investment in new infrastructure.	• Energy and fleet strategy and market, monitoring part of net zero roadmap. • Engagement with our partners and supply chain to support delivery of our ambitions.
Reputation	**Medium term:** Changing customer sentiment on the pace and scale of ambition and solutions.	Further investment required. Investment funding challenged.	• Strong customer insights, engagement and consultation programmes. • Publishing our long-term plans including decarbonisation and adaptation, such as our WRMP.

Opportunities (by TCFD risk type)	Opportunity description	Potential impacts on business	How we are realising the opportunities
Resource efficiency	**Short to medium term:** Technology innovations and changes in customer sentiment supporting improvements such as water demand reductions. Leakage reduction, and circular economy e.g. water recycling.	Effect financial penalty/ incentive position.	• Target 100 commitment and programme to support customers to reduce personal daily water use to an average of 100 litres each per day by 2040. • Leakage reduction programme. • Identifying alternative water sources, such as water recycling projects.
Energy source	**Medium to long term:** A shift to low emission energy sources; technological, planning, infrastructure and policy changes.	Effect financial penalty/ incentive position.	• New framework with suppliers supporting a solar panel installation programme across some of our sites. • Business planning for fleet transition to electric and other low-carbon fuels.
Products and services	**Short term:** Support for customers to reduce their water use. **Medium to long term:** Supply chain carbon reductions. Water recycling.	Effect financial penalty/ incentive position.	• Target 100 commitment and programme. • Customer meter installation programme.
Markets	**Medium term:** Escalation in sustainable bonds and other financial instruments.	Effect financial penalty/ incentive position.	• Sustainable Finance Framework.
Resilience	**Medium to long term:** Ensure ongoing security of water supply. Enhancing asset resilience.	Effect financial penalty/ incentive position.	• Operational Resilience assessments and planning. • Adaptive pathways for business planning.

Our operational performance continued

Our approach to climate change continued

How climate risks inform our business planning

Being resilient to the changing climate is critical for us to deliver services to customers. So, it is vital we understand the risks, so we can plan and adapt to the future. Responding to climate-related issues is embedded in our vision, policies, and long-term business plans. We are also working to better embed these issues in our investment decision-making processes.

Earlier in 2022 we published our Long-Term Priorities, consulting on our plans for providing water and wastewater services, and what our priorities should be in the medium term. The document presented our views on key trends and resulting challenges, as well as opportunities that will influence the future and our priorities in response, which will guide our future business planning and strategy. We are developing our priorities and plans, learning from the consultation feedback and the results of our adaptive planning and scenario assessments. This will inform our business plan for the period 2025–30.

Our Long-Term Priorities (published June 2022)

Our long-term strategy and business planning is informed by regular studies which consider longer-term horizons and external trends and challenges. Our Water Resource Management Plan (WRMP) has now been refined and submitted for further consultation. Our updated WRMP will be published later in 2023, and we will outline any key changes to our plans in our Annual Report for 2023–24.

We have assessed a range of climate scenarios to look at the impacts on water supply, specifically examining rainfall and evapotranspiration, and incorporated this into our planning. Our assessment approach aligns with that followed by all Water Resources South East companies and modelling includes use of UK Climate Projections 2018 (UKCP18) climate scenarios that are based on the on the Intergovernmental Panel on Climate Change (IPPC) Representative Concentration Pathway (RCP) climate scenarios, specifically RCP8.5 (the highest baseline emissions scenario) and RCP2.6 (the lowest baseline emissions scenario).

Our operational performance continued

We also published our Drainage and Wastewater Management Plan (DWMP) in May 2023, and will report further on how this plan is progressing in our annual report for 2023–24.

Our approach to assessing the impacts is set out by Water UK guidance, which includes IPPC RCP climate scenario RCP8.5 and RCP2.6. Modelling focused on the impacts related to flooding, storm overflows and on wastewater assets such as risk of sewer collapse or rising main bursts.

Our plans to ensure operational resilience also consider climate change impact scenarios. These plans build on the qualitative adaptation risk assessment undertaken in 2021 and have assessed the susceptibility of around 18,000 of our operational assets to the potential impacts of climate change.

The review considered the latest UK Climate Predictions, in UKCP18, to assess vulnerability to six shocks and stresses: flooding risk, coastal erosion, heat, subsidence, saline intrusion and risks to natural capital. We are now finalising our mitigation plans for a refined list of sites that will be included in our business plan for 2025–30.

Note 2 of the Notes to Financial Statements includes critical accounting judgments related to climate change in the context of the assessments described here. See page 228.

For more information:

On our decarbonisation transition plan, visit:
southernwater.co.uk/our-story/our-plans/net-zero-plan.

On our third-round climate adaptation report, published in 2021, visit:
southernwater.co.uk/media/8259/5670_climatechangeadaptation_2021_v13.pdf.

On our longer-term trends, challenges and priorities, visit:
southernwater.co.uk/media/7224/5951_long-term_strategic_plan_v12.pdf.

On our plans to secure water out to 2075, visit:
southernwater.co.uk/our-story/water-resources-management-plan.

On our plans to secure a resilient drainage and wastewater system, visit:
southernwater.co.uk/dwmp.

Next steps

We will share further details on our climate-related scenario assessments through the publication of our business plans in October 2023. We will continue to evolve our understanding and reporting of how specific climate-related issues potentially arise over specific time horizons, and how we determine which risks and opportunities could have material financial impact.

We will further develop our long-term decarbonisation plan, including gaining a better understanding of our Scope 3 emissions and embodied carbon, to enable us to produce a more accurate and complete picture of our entire footprint. This insight will help us engage with our supply chain to identify opportunities to reduce emissions. Finally, we will work to expand embedment of carbon impact considerations across all investment decision making.

Our operational performance continued

Our approach to climate change continued

Risk management

TCFD Recommendations: Disclose how the organisation identifies, assesses, and manages climate-related risks.

A. Describe the organisation's processes for identifying and assessing climate-related risks.

B. Describe the organisation's processes for managing climate-related risks.

C. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

We operate an Enterprise Risk Management (ERM) process that is a core component of our governance and internal control framework. It supports us to make better decisions through an improved understanding of risk across the business. Our risk management framework is the totality of systems, structures, policies, processes and people that identify, measure, monitor, report and control or mitigate internal and external sources of risk, for all risks including climate-related risks.

Climate change is identified as one of our 12 principal risks. These are treated with equal weighting. Our risk appetite defines the risks and opportunities we are willing to accept for identified categories. Seven risk components are identified for the principal risk of climate change, with the risk appetite set at 'moderate' for all. Principal risks are monitored by the Executive Risk Committee, reporting to the Audit Committee and ultimately the Board.

We identify, assess, and agree control options for climate-related risks across the business. The ERM process requires identification of the significant risks to the business, and classification of them using a scale of low to major impact. The criteria defined in our risk profile are:

- Business disruption/customer experience
- Brand and reputation/legal and regulatory
- People/health, safety, environmental and security
- Financial – within year and lifetime.

We disclose climate-related risks and management arrangements in our five-year business plan and produce business-specific risks assessments and management plans that are often regulatory documents. These include our Water Resources WRMP, DWMP, Drought Plan, Climate Adaptation Report and operational resilience plans.

Our draft WRMP 2024 sets out how we plan to maintain a high-quality and reliable supply of water for customers and improve the water environment.

Long-term planning requires making decisions for an uncertain future. To manage uncertainty, we have used an adaptive planning approach. We have looked at multiple supply-demand balance scenarios in view of the uncertainties associated with growth forecasts, the level of reductions required in the water we take from the environment and climate change impacts.

We are also working on our first DWMP that sets out how we will make sure our drainage and wastewater systems resilient over the next 25 years. One of the key challenges the plan addresses is climate change.

We conducted a review of the operational resilience of our sites, including an assessment of the impact of climate-related risks, as part of our business planning for 2025–30. Six shocks and stresses were considered: flooding; asset heat stress; subsidence; coastal erosion; water source salination; and resource availability (natural capital). The assessed scenario conditions included a representative concentration pathway 'RCP8.5' as an 'adverse' scenario for subsidence, saline intrusion, and heat stress and 'RCP2.6' as a 'benign' scenario for coastal flooding.

The work categorised sites into either: further work required to enhance resilience; sites where further investigations were required; or sites for which no further enhancement was required. Work continues to create a list of priorities for 2025–30.

Our operational performance continued

For more information:

On our ERM approach, see Risks – pages 120 to 132.

On our plans to secure water out to 2075, visit: **southernwater.co.uk/our-story/water-resources-management-plan**.

On our plans to secure a resilient drainage and wastewater system, visit: **southernwater.co.uk/dwmp**.

On our plans to maintain a secure water supply and protect the environment during dry weather and drought, visit: **southernwater.co.uk/our-story/water-resources-management-plan/our-drought-plan**.

On our third-round climate adaptation report, published in 2021, visit: **southernwater.co.uk/media/8259/5670_climatechangeadaptation_2021_v13.pdf**.

Next steps

We continually assess how climate-related risks impact our enterprise risk profile, as we build on our understanding, including those under different scenarios. We are embedding climate change, specifically mitigation, into our assessment of suppliers for our business plan period 2025–30.

Our operational performance continued

Our approach to climate change continued

Metrics and targets

TCFD Recommendations: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

A. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

B. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

C. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

We measure our climate-related performance using a range of metrics and targets, and report on these in our Annual Report and Annual Performance Report. These metrics focus on our key risks related to water supply, wastewater removal, and natural capital. We also report on our carbon emissions, in alignment with regulatory requirements, and to report progress on our decarbonisation target.

The following tables summarise the key metrics we use. This includes reporting on our alignment with the suggested metrics in the TCFD cross-industry guidance. Further information on our performance can be found on pages 42 to 95 and in our Annual Performance Report.

TCFD's cross-industry metric categories

Metric category (defined in TCFD guidance)	Metrics		Notes
GHG emissions Absolute Scope 1, Scope 2, and Scope 3; emissions intensity	MT of CO_2e	See data tables in the Streamlined Energy and Carbon Reporting section, pages 93 to 95.	We disclose Scope 1 and 2 emissions, a proportion of our Scope 3 emissions, and emissions intensity figures.
Transition risks Amount and extent of assets or business activities vulnerable to transition risks	N/A	Not available	We do not consider a quantitative metric. We will consider the suitability of such and report on our conclusions in 2024.
Physical risks Amount and extent of assets or business activities vulnerable to physical risks	N/A	Not available	We are finalising our latest modelling and assessments for operational resilience, WRMP and DWMP. We will report findings next year.
Climate-related opportunities Proportion of revenue, assets, or other business activities aligned with climate-related opportunities	N/A	Not available	We do not consider a quantitative metric. We will consider the suitability of such and report on our conclusions in 2024.
Capital deployment Amount of capital expenditure, financing or investment deployed toward climate-related risks and opportunities	N/A	Not available	We do not calculate this metric currently. We will consider the suitability and a methodology for such and report on our conclusions in 2024.
Internal carbon prices Price on each tonne of GHG emissions used internally by an organisation	N/A	Not available	We do not apply an internal carbon price (notional or actual) currently. We are monitoring use of such and consider its suitability.
Remuneration Proportion of executive management remuneration linked to climate considerations	The following 2022–23 metrics are examples of those key to our climate change resilience and are measures included in our Annual Bonus Plan (for our executive and all employees): Internal sewer flooding incidents and Leakage.		For more detail see Directors' Remuneration Report, pages 184 to 201.

Our operational performance continued

Other climate-related risk metrics and targets

Metric category	Metrics and performance	
Targets set by our regulator Ofwat (as performance commitments for 2020–25)		
Leakage	Leakage – Ml/d	See pages 42 to 95. For further details on our regulated metrics and targets see our Annual Performance Report.
Water consumption	Per capita consumption – l/p/d	
Internal sewer flooding	Number of incidents per 10,000 sewer connections	
Pollution	Number of incidents per 10,000km of sewer	
Water resource abstraction	Distribution input – Ml/d Abstraction incentive mechanism – Ml/d Effluent re-use – m^3	
Renewable generation	% energy generated from renewable source	
Asset health	Unplanned water outage – % Risk of sewer flooding in a storm – % Number of sewer collapses per 1,000 kilometres of all sewers	
Natural capital	Number of river catchments with natural capital accounts	
Net zero transition plan target and pledges		
Operational net zero carbon by 2030	tCO_2e	See Our Net Zero Transition Plan below
Energy used in the reporting period	MWh	We report absolute energy use, energy by source and intensity. See the data tables in the Streamlined Energy and Carbon Reporting (SECR) section, pages 93 to 95.
100% renewable-backed power from April 2021	% electricity from fully accredited renewable source	100% since April 2021.
Generate 24% of own renewable energy by 2025	% energy generated by on-site renewables	13.30%
Fleet electrified or low carbon fuels by 2030	% of fleet	0%. A study has started with UK Power Networks to develop our fleet electrification roadmap.
Aim for nature-based solutions and work in partnership	Not applicable	We have embedded nature in our risk and value investment process and are working in partnership to deliver solutions.

Our operational performance continued

Our approach to **climate change** continued

For each of our regulated metrics described above a target is set for the business plan period (2020–25). Information on these targets and our performance is described in the pages referenced in the metrics tables above, and in more detail in our Annual Performance Report.

Our greenhouse gas emissions and associated energy use data is available in the Streamlined Energy and Carbon Reporting (SECR) on pages 93 to 95.

This year we implemented a process to expand the scope of our measured Scope 3 emissions to include our construction and refurbishment projects. We also completed a project to review the wider Scope 3 emissions from our value chain and investigated how our plans and targets align to a 1.5 degrees centigrade pathway. We are planning how these findings are integrated in our longer-term decarbonisation roadmap, and ongoing carbon emission disclosures.

Our Net Zero Transition Plan

We published a Net Zero Plan in 2021, confirming our commitment to the Water UK Public Interest Commitment to net zero operational emissions by 2030. We see this as an interim target in our long-term strategy to reach net zero by 2050. We recognise the important role we, and the water sector must play in reducing emissions while balancing this with the need to provide our services at an affordable price to our customers. Our decarbonisation approach remains to follow the carbon hierarchy:

Reduce and avoid

emissions through efficiency savings.

Replace:

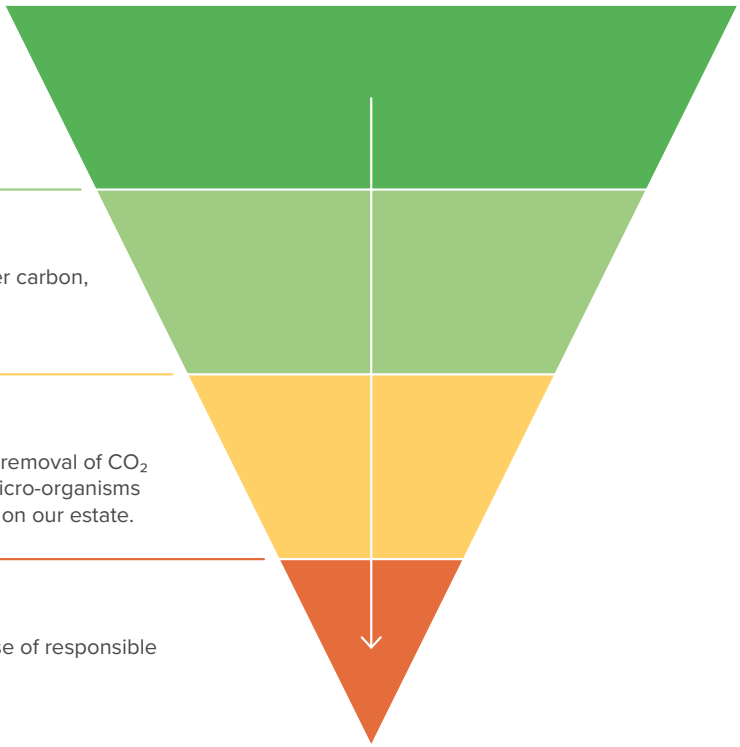
use alternative solutions that are lower carbon, for example technology change.

Remove

emissions through sequestration (the removal of CO_2 from the atmosphere by plants and micro-organisms and its storage in biomass or the soil) on our estate.

Offset

any residual emissions through the use of responsible carbon offsetting.



Our operational performance continued

Forecasts against our 2030 commitment indicate that our plans to 2030 will mean we cannot achieve net zero without the use of offsets for residual emissions.

We face significant challenges to deliver our net zero 2030 commitment; these challenges are both in terms of feasibility and deployment. We believe best value to our customers will not be served by purchasing external offsets and our strategy is not to purchase these on the external market. As an alternative we are continuing to explore how we could support over the medium- to long-term carbon sequestration through our strategic land management plan and work to employ nature-based solutions. We are working with the wider water sector to understand the range and scale of carbon offsetting opportunities.

Our Executive team remains committed to decarbonisation over the long term and has tasked our teams to extend the horizon of our net zero planning from 2030 to 2050. We will better align our net zero transition planning with our long-term delivery strategy and look beyond solely operational emissions. This means we will align our plans with the government's 2050 net zero target and regulator Ofwat's direction to focus on location-based Scopes 1, 2 and 3 emissions.

Our operational performance continued

Our approach to climate change continued

Our operational carbon emissions

In 2023 we expanded the scope of operational emissions we are able to report; the sources of operational emissions are listed below. In 2023 our reported net market-based operational emissions were 109.5 kilotonnes of CO_2e (2023 like-for-like emissions with 2022: 72.9 kilotonnes CO_2e) (2022: 81.6 kilotonnes CO_2e). Our net location-based emissions for 2023 were 215.2 kilotonnes of CO_2e (2023 like-for-like emissions with 2022: 157.7 kilotonnes CO_2e) (2022: 161.2 kilotonnes CO_2e.

Scope 1 emissions:

- Direct emissions from burning of fossil fuels (including CHP generated onsite)
- Process and fugitive emissions
- Transport: Company owned or leased vehicles

Scope 2 emissions:

- Electricity use: For the location-based approach this is the average grid emission factor for power from the electricity grid.
- Electricity use: For the market-based approach this uses the carbon intensity of the energy we procure from the electricity grid.

Scope 3 emissions:

- Transmission and distribution losses from the supply of total grid electricity we use
- Business travel on public transport and private vehicles used for company business
- Outsourced activities (not included in Scope 1 or 2)
- Purchased electricity; extraction, production, transmission and distribution (so-called “well to tank” emissions) (for the location based approach only) (*first reported in 2023).
- Purchased fuels; extraction, production, transmission and distribution so-called “fuels well to tank” emissions) (*first reported in 2023).
- Chemicals purchased (*first reported in 2023).
- Waste disposal (*first reported in 2023).

For details on our emissions footprint see pages 94 to 95.

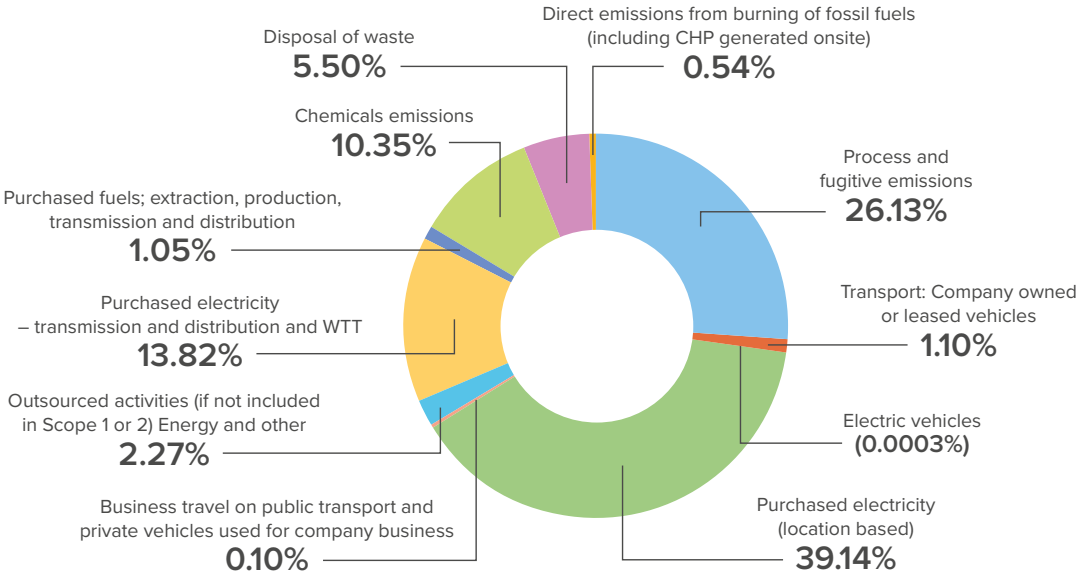
Energy use is the largest source of our reported emissions at 56.8% (location-based approach).

In 2023 Southern Water used 574,493 MWh of energy for water and wastewater operations, an increase on 2022. Wastewater is the largest user of energy, accounting for 67% of consumption. Most of this energy is used to power our pumps and blowers.

We also generated 51,095 MWh of energy in wastewater via our CHP engines, which offsets 16% of our wastewater consumption and prevents the need for this energy to be imported. Water supply accounts for the remainder of the energy needed to power our operations, with solar generation totalling 2,943 MWh, helping to ease the need for imported energy at our supply works. We currently generate 11% of our electricity from renewable sources. For details on our energy use see page 93.

Our operational performance continued

Sources of our operational carbon emissions



Process emissions:
Emissions from water and wastewater treatment formed 26.1% of our 2022–23 operational emissions. Process emissions occur primarily from our sewage and sludge treatment processes producing methane and nitrous dioxide emissions. These emissions have a significantly higher Global Warming Potential than carbon dioxide emissions.

These emissions are the biggest challenge for us and the water sector. We are working in partnership to fully understand the scale of the problem, and identify and test measurement, mitigation, and abatement solutions. Our bioresource management plans are focused on efficiencies and opportunities to upgrade our infrastructure, based on impact, cost, policy constraints and the availability of deployable solutions.

Energy emissions:
Emissions from our use of energy formed 56.8% of our 2022–23 operational emissions. Most of our energy used is electricity, but we also use gas for heating, diesel for generators and gas oil in our anaerobic digestors. While the electricity grid is decarbonising, we continue to review options to change the source of our energy; we have sourced 100% of electricity from a renewable-backed source and invested in renewable on-site electricity by installing solar panels. We continue to explore other low-carbon sources of energy, either on site or in partnership such as via a Power Purchase Agreement. We are also focused on energy efficiency.

Transport emissions:
Emissions from the use of fuel to power vehicles used for business activities formed 1.2% of our 2022–23 operational emissions. We are working to transform our LGV fleet to electric over the medium term and exploring how we convert our HGV fleet to no or low forms of carbon, such as hydrogen and biogas, in the medium to long term.

We have also launched an employee car benefit scheme for electric and plug-in hybrid cars.

For more information:

On our regulatory Streamlined Energy and Carbon Report, pages 93 to 95.

On our climate-related regulatory targets, visit: **southernwater.co.uk/our-performance/reports/annual-reporting**.

On our original 2030 net zero plan visit: **southernwater.co.uk/our-story/our-plans/net-zero-plan**.

On our sustainable bonds performance: **southernwater.co.uk/our-story/our-plans/investors**.

Next steps

We will develop our transition planning, including the reset of our decarbonisation roadmap out to 2050, and the conclusion of adaptive pathways work as part of our business planning for 2025–30. Our decarbonisation roadmap will be underpinned by four principles: further embedding a culture for decarbonisation; industry collaboration; innovation and research and development; and an adaptive approach. We will work on supporting strategies for energy and non-regulated funding.