Our operational performance

Supplying high-quality water you can trust

Our performance at a glance

In 2022/23, we maintained high-quality drinking water through advanced technology and monitoring systems. Our outstanding Compliance Risk Index (CRI) score of 1.092 (lower is better) demonstrated industry-leading performance. Despite challenges like extreme temperatures and a freeze/thaw event, we conducted reservoir inspections and responded effectively. We increased storage resilience with the acquisition of Sundon reservoir and enhanced treatment works with UV installations. Energy efficiency improved by 1.1%, and our two solar-farm sites reduced our carbon footprint. We invested in employee competence through training and apprenticeships in water treatment and operations, as well as electrical and mechanical skills.

Maintain high-quality water

During 2022/23, we continued to supply high-quality drinking water by using the latest technology and sophisticated monitoring systems at our treatment works, regularly inspecting the integrity of our storage reservoirs, and operating our distribution systems in a manner that ensures water arrives at our customers' properties in the same condition as it leaves our water treatment works.

Our Compliance Risk Index ('CRI') score, the measure used by the Drinking Water Inspectorate ('DWI') to assess water companies' performance with regard to water quality, was 1.092 for calendar year 2022 (lower is better). This was well within the dead band of 2 for our performance commitment, and was one of the leading scores across the industry in 2022 (with a score of 5 being the industry average).

Water treatment, distribution and supply

During 2022/23, our teams did an amazing job to keep to the high-quality standards that our customers expect, managing a challenging number of reservoir inspections (last year 52 and another 22 in the year to date), which help to achieve our industry-leading CRI score. We have also worked around the clock to respond effectively during the summer peak-demand period, when our region experienced the hottest temperatures ever recorded here, resulting in a significant increase in the demand for water – and in the freeze/thaw event in December 2022 that had a significant impact across the industry.

We have successfully completed the purchase of Sundon reservoir, increasing our storage resilience in our local areas, and we are in the process of undertaking UV installations at two of our largest water-treatment works to enhance them further. Once operational, the new Sundon reservoir will allow us to bring in more water from Grafham reservoir, and help reduce the amount we take from chalk groundwater – helping our globally rare chalk streams.

We improved our energy efficiency in the year to date by 1.1% across our production sites, and we are now running our second solar-farm site, to support our Walton Water Treatment Works, providing power combined from our two installations up to 1,200kW, to reduce our carbon footprint and our reliance on grid electricity. A second phase has been initiated to enhance our energy efficiency further.

We are continuing to invest in our people, and increasing our teams' competence, with the continuation of CABWI Level 3 and Level 4 Diplomas in Water Treatment and Operations, and have now successfully completed training our operatives through an Electrical and Mechanical Apprenticeship.

142

tonnes of nitrate prevented from reaching aquifers through Affinity Water funded cover crop schemes

Building a greener future with the farming community

For the fourth consecutive year, we ran an innovative scheme in Hertfordshire, incentivising farmers to grow cover crops over the 2022/23 autumn and winter period. Farmers can bid competitively for funding through the EnTrade environmental trading platform.

The aim is to work with farmers to improve groundwater quality and protect chalk streams by reducing the amount of bare agricultural soil during winter. Cover crops have a range of benefits, including nutrient and carbon capture, reduced run-off into rivers, increased water-holding capacity to support flood and drought resilience, soil health and improved biodiversity.

The auction was successful, with funding for over 500 hectares of farmland to grow cover crops this autumn and winter. Over the past four years, we have funded over 3,000 hectares of cover crops in vulnerable catchments, saving an estimated 142 tonnes of nitrate that could leach into groundwater aquifers or run off into precious chalk rivers.

A natural-capital evaluation of the scheme demonstrated that for every £1 invested in cover crops, over £6 of environmental benefit is realised, with particular benefits for soil health and climate regulation.

We also ran a programme of successful pesticide-reduction schemes across our supply area, providing funding for measures such as over-winter cover crops, taking land out of arable production with full-year cover crops, companion cropping in oilseed rape, and switching to water-friendly break crops that use fewer pesticides. Funding for these water-friendly measures has influenced crop rotations and been targeted on high-risk areas for water, covering over 1,000 hectares of eligible arable land. These schemes have significantly reduced pesticides lost to water and provided enhanced resilience to drinking-water quality and protection of aquatic ecology in our rivers.

Furthermore, we have funded pesticide-reduction field trials to investigate the multiple benefits of companion cropping oilseed rape and how farmers can reduce their doses of problematic herbicides while still maintaining grassweed control and protecting water.

> "For every £1 invested in cover crops, over £6 of environmental benefit is realised with benefits for soil health and climate regulation."

Alister Leggatt
Senior Asset Manager

UNSDGs

Our alignment with the UN Sustainable Development Goals

Our operational performance continued

Making sure you have enough water, whilst leaving more water in the environment

Our performance at a glance

Our commitment is to reduce water usage by 12.5% by 2025 through metering, customer education, and water-efficient devices. While we haven't reached our target yet, we're making progress with a savings of 27.2Ml/d through demand management initiatives. We conducted over 16,000 in-home and virtual water-efficiency checks and completed 1,300 internal repairs with the help of a new supplier. Our metering programme has installed 50,000 meters this year, covering approximately 72.3% of households in our central region and our industry-leading Save Our Streams campaign has now gained 240,000 customer sign-ups since launch.

Despite extreme weather challenges, we've reduced leakage by 15.8% and are on track to achieve a 20% reduction for AMP7. We're actively testing innovative detection methods and equipment to combat leakage, including satellite detection, AI solutions, and acoustic devices.

We're progressing well with network reinforcements, treatment installations, and abstraction reductions. We're closely monitoring the environmental impact of groundwater abstraction reductions to inform our long-term strategy.

Leakage

It is essential we continue to work hard to reduce leakage on our network; our customers expect us to lead the way, to show our commitment to meeting the expectation we have set ourselves with one of the highest reduction targets in England and Wales for AMP7.

This third year of AMP7 has been extremely demanding. From reducing our leakage last year, we entered the year in a very good position, but we have seen an unprecedented level of leakage breakout from two events in the year. Firstly, because of the very dry and hot weather through the summer, soil moisture deficit, which causes ground movement and pipes to leak, was at the highest we have seen in 20 years. This was combined with significant customer demand, leading to additional stress on the network. We then experienced a significant freeze/thaw event in December that was greater than the so-called 'beast from the east', which led to several months of recovering the leakage breakout.

Despite the challenges, we have achieved our year 3 performance commitment, and have reduced leakage by 15.8%. This has put us back on track for achieving the full AMP7 target of a 20% reduction.

We continue to work closely with our supply chain as we test innovative detection methods and equipment, to ensure we are doing all we can to reduce leakage. This year, we have tested innovative satellite leakage detection, implemented an AI solution using an array of sensors across our network, deployed new acoustic-detection devices, and increased the use of our intensive leakage surveying technique.

Our leakage performance is detailed on page 74.

Abstraction reductions

Work has been progressing well with our network reinforcements, installation of new treatment and booster pumps to facilitate our AMP7 abstraction reductions. We have also started work at Sundon which, once complete, will enable us to maximise our import from Anglian Water. We remain on target to complete our programme of works by December 2024.

We are continuing to monitor the environmental response to reducing groundwater abstraction in the Upper Chess and in the catchments where we reduced abstraction in AMP6. We are using this information to support our long-term strategy to ensure we target future groundwater abstraction reductions in catchments where there will be most benefit.

Per capita consumption

Our commitment is to reduce water use by 12.5% by 2025, through metering, inspiring our customers to use less, and through water-efficiency devices.

PCC is the metric used by the water industry to measure water use in the home.

While we have not hit our target, we continue to make progress towards our challenging ambition to achieve a significant reduction in demand for water. We have achieved 27.2Ml/d savings via all our demand management initiatives.

We took on a new supplier at the start of the year to run over 20,000 in-home and virtual home water-efficiency checks, and completed over 1,400 internal repairs.

Our metering programme continues, with over 50,000 meters installed so far this year. We now have approximately 72.3% of households in our central region on a metered supply.

Our innovative Save Our Streams campaign, the biggest water saving campaign in the UK, continues to help our customers start their water saving journey. In 2022, a further 91,000 customers signed up to the water saving campaign taking the total of 240,000 sign-ups.

Case study

Investing in our network for a sustainable future

A new trunk main from Black Fan Road to Digswell will enable changes to abstraction licences at two of our groundwater sources (Fulling Mill and Digswell.)

The project will see 3km of new 300mm and 400mm pipeline installed, including two pressure controlled and metered connections into our existing mains network. Detailed design for the scheme started in July 2022 with hydraulic completion of the pipeline scheduled for September 2023.

This £2.6 million investment will enable us to deliver reduced groundwater abstraction by December 2024 with our source at Fulling Mill having zero abstraction at all times (post December 2024) and licensed average abstraction at Digswell reducing from 7.2Ml/d to 1.5Ml/d. Our peak license of 8.1Ml/d will remain unchanged.

These reductions form part of our AMP7 Sustainability Reductions programme which was agreed with the Environment Agency and costs included within our PR19 Ofwat Business Plan.

The project is a critical element in delivering groundwater abstraction reduction which will contribute to improvement to river flows and local ecology along the River Mimram.

This investment also delivers improved network resilience through the two new connections and maintains the same level of security of supply and water quality to the 21,000 properties affected by the reduction in abstraction.

UNSDGs

Our alignment with the UN Sustainable Development Goals

Our operational performance continued

Providing a great service that you value

Our performance at a glance

Our customer-first approach aims to improve services and establish ourselves as the leading community-focused water company in the UK.

Although our C-MeX measure remained mostly unchanged this year due to service disruptions caused by extreme weather, our customers' experience scores steadily increased, surpassing industry averages and elevating our rankings compared to other companies. We successfully launched our new brand identity, conducted our first TV ad campaign, and ran initiatives to address leakage and water waste, positively impacting customer perceptions.

We strived to keep bills affordable, particularly for customers facing financial challenges. We provided a discounted tariff for eligible low-income customers and implemented measures outlined in Ofwat's Paying Fair guidelines. Customer engagement programmes were employed to raise awareness and uptake of bill payment assistance, with over 97,000 customers now on a social tariff – one of the highest in the industry.

Being the monopoly supplier and steward of a precious resource for future generations, we are acutely aware that we must continually invest in building trust and authenticity with our customers, and make ourselves accountable to our communities for our performance.

By continually increasing our focus on customers, we strive to make improvements in the service we provide, and fulfil our vision of being the UK's leading community-focused water company.

Improving the customer experience

Our C-MeX (customer service) measure has been largely flat this year, hampered by two periods of severe disruption to consumers – summer drought and winter freeze/thaw event Customers' experience scores, however, have steadily increased over the year, outstripping the industry average and yielding an increase in our rankings compared to other water companies.

We rolled out our new brand identity fully and undertook our very first TV ad campaign, focused on increasing customers' awareness of what we did about leakage. We also ran a an extensive campaign from October with the aim of motivating customers to waste less water. Despite launching after the summer period, the campaign changed customer perceptions and attitudes towards Affinity Water.

Despite the summer being a challenging period, we managed to avoid putting in a temporary usage (hosepipe) ban, and this also contributed positively towards an improved experience score, with customers happy about how we communicated it to them.

Keeping bills affordable

In the communities we serve, some of our customers struggle to afford household bills, including water. Most of our customers receive a combined bill for both water and sewerage charges, so affordability can also be affected by changes in the sewerage charges set by wastewater companies. In 2022/23, however, the average increase in the combined water and sewerage bill in our area was about 1%.

We help alleviate affordability difficulties by offering a discounted tariff to eligible, low-income customers, and during the year we worked to meet the requirements of Ofwat's May 2022 Paying Fair guidelines. We ran a targeted programme of customer engagement to improve awareness and take-up of the help we offer with bill payment. We also encouraged our customers to save water and money through our Save our Streams campaign, and by providing information about customers' water use on bills.

Case study

Affinity Water and Scottish and Southern Electricity Networks join forces to help customers

We joined forces with Scottish and Southern Electricity Networks ('SSEN') to help west London customers in vulnerable circumstances access free, additional services from both utilities.

We used data and mapping tools to identify certain areas with a higher proportion of elderly residents or cases of social isolation, and worked together so customers of both utilities could access the Priority Services Register ('PSR').

Around 3,600 households in the London Borough of Hillingdon received an explanatory letter to highlight the financial support available to help with water bills and SSEN services. It set out easy ways for customers to reach each organisation and encouraged them to sign up for the free services available.

Customers are eligible for the Priority Services Register if they:

- have a disability
- have a chronic illness
- use medical equipment or aids reliant on electricity
- use oxygen in the home
- are over 60
- live with children under five
- have poor mental health
- are blind or partially sighted

Depending on circumstances, we may also be able to help reduce how much customers pay for water through our low-income tariff ('LIFT'), a fixed discounted charge. If eligible for the tariff, customers will receive a fixed-priced bill each year for clean water and to help keep payments simple and affordable. They can also make smaller, monthly payments throughout the year.

93%

of vulnerable customers said they were happy with our service

120k

Customers signed up to our Priority Services Register

UNSDGs

Our alignment with the UN Sustainable Development Goals

Our operational performance continued

Minimising disruption to you and your community

Our performance at a glance

We invested over £140 million this year in our physical assets and to prioritise customer and environmental commitments. We responded to extreme weather, maintained water availability through proactive maintenance, acquired Sundon reservoir to increase network resilience and enable further sustainability reductions by 2025, and enhanced treatment capabilities.

Underlying performance for supply interruptions was strong, but was again impacted by the extreme weather events. We've made changes, including new programme boards, improved control, modelling, training, and situational awareness tools.

Regarding low pressure, our performance was 150.93 compared to a target of 1.51, but our average property time was 2.33 hours against a target of under 10 hours. While one measure fell short, we believe average property time reflects the overall customer experience. We aim to improve resilience, network investments, and resource optimisation to reduce low-pressure instances.

Investing in our assets

We continually invest in our physical assets, both above and below ground, as well as meeting our environmental obligations such as biodiversity. We prioritise our investments by balancing costs, risks and performance. This year, we have spent over £140 million to meet our commitments to our customers and the environment.

We have prepared for, and managed, our response to extreme weather, including the hottest summer temperatures on record and periods of freeze/thaw over the winter months. We spent nearly £1m on proactive maintenance of our above-ground assets to maximise water availability in the summer.

We have completed our purchase of Sundon reservoir. This important project allows us to maintain customers' water supplies as we reduce our abstraction. Work continues over the next two years to build the treatment plant at Sundon, to condition our imports from Grafham water.

We are part-way through construction of enhanced treatment capabilities at our two largest water-treatment works. Installing ultraviolet technology adds resilience to our ability to remove cryptosporidium, should it be present, from the raw water we take from the River Thames. Work at both sites will complete before 2025.

Reducing supply interruptions

We have had a difficult year with supply interruptions. We unfortunately failed both our over-three-hour and over-12-hour performance commitments. We had a challenging summer due to the prolonged hot weather, which caused demand issues at our above and below-ground assets. We then had the freeze/thaw event, which was one of the toughest periods we have had for many years.

We had significant interruptions due to reservoirs emptying and not keeping up with demand. The increased demand was a direct result of the sudden change in temperature from below zero to above 10 degrees. We prepare for extreme weather ahead of these incidents occurring and the vast majority of customers are kept in supply, however some customers are unfortunately impacted during these times.

We have made some major changes in our Interruptions to Supply approach, including:

- New programme boards set up to make improvements in key projects.
- Top-five projects set up to improve performance going into year four.
- Controlling Mind – a single team controlling access to, and operation of, our assets.
- Modelling in Control Room – evolving our existing capability to be a round-the-clock team to reduce response times for complex modelling. Accurate post-event validation.
- Training – developing the right capabilities (technical and leadership) to achieve the right outcomes consistently.
- Additional pressure loggers will allow us to maximise the value from our situational awareness tool.

Underlying performance was very good this year. Had we not added 10 minutes as a result of the extreme summer temperatures and freeze/thaw incident in December, our

year end figure would have been below 5 minutes and well within our performance commitment, which reflects hard work and contributions from all our teams.

Low pressure

Customers have a right to expect the pressure and flow at their property to meet minimum requirements as set out by our regulator, which apply to the whole industry. Persistent low pressures can affect our customer's daily lives, for example it taking them longer to fill sinks and baths and, in extreme cases, affecting the performance of water-using appliances in the home.

The low-pressure KPI definition is properties at risk of receiving low pressure, per 10,000 properties, and we receive a financial penalty if we fail to achieve the regulatory target. Our performance for 2022/23 is 150.93 compared to the target of 1.51. We also have a second performance commitment for low pressure, which reflects the average time a property in our supply area receives pressure or flow below the reference level. Our annual performance for 2022/23 is 2.33 hours compared to a target of under 10 hours.

While we failed to achieve one low pressure measure, we outperformed the other. We believe the 'average property time' measure best represents the overall customer experience for low pressure. There is no doubt that this year has been challenging due to extreme weather events, and unplanned strategic operational issues have all affected customers' pressures in ways that have been difficult to mitigate.

We recognise we need to improve on this measure. We are focused on improving our resilience (to extreme demand and other adverse operational events), investing in our network (implementing schemes to improve pressure in known problem areas), and investing in our people (increasing our resources to monitor and optimise our current assets). These workstreams are all focused on reducing the number of properties where pressure drops below the reference level, or reducing the length of time properties experience low pressure.