Independent Water Commission
Call for Evidence
Pennon Group Submission
April 2025







Pennon | South West Water | Bournemouth Water | Isles of Scilly Water | Pennon Power | Pennon Water Services | water business | ses water

About this Document

This document contains the Pennon Group's response to the Water Commission's Public Call for Evidence.

In preparing this response, we have worked closely with our peers across the industry and with our trade body, Water UK. We have also listened carefully to stakeholders in our region, including customers, our WaterShare+ Customer Panel, and local interest groups.

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Pennon Group Response Overview

Introduction

Pennon Group plc water businesses serve c. 4 million residents across Devon and Cornwall, the Isles of Scilly, Bournemouth, Bristol, and parts of Dorset, Surrey, Sussex, Kent, and London.

Our regions are unique. Mostly rural, we are home to 157 bathing waters, 860 miles of coastline, 4 national parks, and 11 Natural Landscapes. We also serve business hubs in Bristol, Exeter, and Plymouth. The South West region has key industries in tourism, fishing, and agriculture, supporting an economy that is equivalent to the size of Greater Manchester – all of which rely on a clean and healthy water environment.

We are a FTSE 250 listed business, one of the few remaining listed businesses in the sector. Our progressive customer centric ownership model, WaterShare+, gives customers both a stake and a say in their local water company, with c. 90,000 shares issued to customers since launch in 2020.

Executive Summary

We welcome this review, at a pivotal time for the sector when investment is at record levels with equally ambitious outcomes for society.

At Pennon Group plc, we take our leadership role in the UK Water sector seriously, with a clear strategy committed to the sector and environmental infrastructure. Our strategy has seen us steadily grow, with the acquisition of Bournemouth Water in 2015, the successful adoption of the Isles of Scilly, and the acquisition of Bristol Water in 2021, bringing financial resilience and investments in infrastructure and services to customers and communities. We supported the development of the B2B market, with our retailers Pennon Water Services and Water2business, now with c15% market share and delivering excellent customer service in England and Scotland. Most recently, we acquired Sutton and East Surrey, with a commitment to resolve and improve the ongoing financial resilience, better position the business to serve its customers, as well as protecting jobs for the longer term. Along with our renewable energy investments at Pennon Power, we are also investing to underpin our 2030 Net Zero commitments.

As one of a few FSTE listed businesses in the sector, we can also offer a unique insight into what matters most to customers, stakeholders and investors alike. Our progressive customer centric ownership model, Watershare+, gives customers both a stake and a say in their local water company, with circa 90,000 shares issued to customers, nearly five times the number of institutional investors since launch in 2020. With quarterly public meetings, and a customer AGM, we are forging a new path, and one in which the interests of customers and shareholders are more aligned than ever before.

Generations of fathers, sons, and more recently mothers and daughters have dedicated their careers to this sector. These generations have also seen first-hand what a combination of investment, innovation, effective regulation and brilliant colleagues can achieve, in bringing together customers and communities, driving up standards, supporting public health and underpinning the economic growth of the sector with critical national infrastructure.

As a sector, and as a business we stand ready to deliver, and our response is therefore focused on how we might do that, building on four key areas:

1. Our role in Critical National Infrastructure, supported by a national framework and facilitated through local devolution

The water sector is one of 13 defined national infrastructure sectors necessary for the country to function and upon which daily life depends. The National Infrastructure Commission estimates that our sector will need to make capital investments of c.£300bn between now and 2050. This places us on a par with the electricity distribution and transmission sectors in terms of infrastructure investment. Strategic investment and public confidence are therefore more interdependent than ever before. We would like to see the sector put on an equal footing with other utilities such as energy with a national framework, to take account of climate resilience through the introduction of legally binding resilience standards, stretching environmental and service goals, the UK's Net Zero goals and with local devolution to support economic and socioeconomic regional priorities. We believe there is a role for Government to clearly set the strategic direction and the pace of investment.

We need a framework that recognises water and waste water are inherently different. Water priorities should be set nationally, focused on a national grid for water, with waste water priorities set regionally, focused on controlling pollution at sources and facilitated through local devolution.

At Pennon, with significant experience of acquiring water only businesses, alongside our water and waste water assets - it is clear that there are significant differences in how we should invest, operate and think strategically about the services we provide. Put simply, the challenges facing water resources nationally, are not the same as the challenges for driving regional catchment water quality, and health. Securing sustainable resources for drinking water, in the face of climate change and for the longer term, should be a national priority, set by government policy - just as it is today for power, cementing the water sector's critical role in National Infrastructure and in turn unlocking unrivalled access to funding streams.

Positioning the water sector as critical national infrastructure would unlock other benefits too. Currently the water sector, with the strict liability for assets and services, does not have the same powers as other in critical national infrastructure, leading to increased risk of supply. Water is the only sector that you connect to without recourse and when seeking to gain entry across land to manage critical assets, is not considered an automatic right.

Devolving power regionally, would also mean that a region like the South West, that looks after a third of the nation's bathing beaches, with an imperative to drive improved bathing water quality, could be co-ordinated in the catchments by those who are best informed and motivated to deliver the improvements, with empowered communities, and with an outcome, that is faster and cheaper for all.

2. We are supportive of regulatory reform to support fair and predictable regulation

Regulation does need a reset, sharpening responsibilities, with clear remits.

Our focus is always to ensure we maintain constructive working relationships with Government and our Regulators. It is what the public expects from us. In general, all parties work constructively to achieve shared objectives, and there is a great deal that works across current regulation in the sector, with models that can inspire. For example, since privatisation, the RAB based model has driven over £236bn of investment across the sector, accessing efficient funding to deliver a step change in outcomes. This same model has also driven (and continues to drive) a step change in investment across several infrastructure providers across the UK – e.g. energy and aviation.

However, to effectively regulate a transforming water sector, it's only right that regulation should also reset. Multiple regulators, with overlapping duties, and sometimes conflicting priorities, is confusing for companies and customers and a contributor to declining outcomes. For example, customers today believe reducing pollutions that affect land, home, people and amenities are as important as reducing pollutions that hit a water course, yet the Environment Agency's current Environmental Performance Assessment measures just 4% of the emissions currently in Ofwat's reporting framework.

Supported by a clear framework, Ofwat's accountabilities could be refocused back onto the national priorities of security of supply, affordability, and in driving competition and investment, supported by the Environment and

Drinking Water regulators who are there to drive better outcomes for the environment and public health. In addition, setting up a consumer champion Ombudsman with the legal power to resolve disputes, could go some way to restore public confidence and in bringing the water sector into line with other sectors such as energy, communications and rail sectors.

3. We are at a pivotal point in the sector, where ongoing investor confidence is key to deliver for customers

Customers rightly want us to be ambitious, but this can only be achieved by a significant step up in investment, underpinned by funding from investors. In any one five-year delivery period, 2/3rds of funding for investment comes from investors, with roughly 1/3rd from customer revenues. We must not lose sight of the fact that both debt and equity are funding the change we collectively want to oversee. The challenge is how we can ensure that in balancing risk and return, the cost of equity is appropriately balanced, and we can continue to attract investment at an economic rate. Investors are increasingly telling us that the attractiveness of the sector is reducing yet we know there's a proposed c£300 billion of private capital needed for investment over the next 25 years. Our solution to this, has to be in the resetting of long-term national priorities around water, with regional priorities for waste. This could unlock investment from a wider group of investors to meet both sides of the coin.

We have long advocated that the interests of investors and customers are more aligned than some might think. As the only water company to give customers a stake and a say in their local water company – with circa 90,000 customers as shareholders, nearly five times the number of institutional investors since launch in 2020, we are well qualified to speak to this point.

4. Improving Customer Outcomes – giving customer a choice

The water industry in England and Wales has been a regulated regional monopoly business since privatisation in 1989. This has meant that, with limited exceptions, customers cannot choose their water supplier. The introduction of the non-household market in 2017 was an important step forward in introducing competition into the sector. With three business to business (B2B) retailers at Pennon, we were an early entrant and have consistently been a strong advocate of the market.

Not all customers are universally unhappy, although we would all agree there is a lot to do to rebuild trust. The introduction of the non-household market in 2017 was an important step forward for the sector. Pennon as an early entrant, has grown market share to c15% nationally, with trust pilot scores on a par with the John Lewis/ Amazon and Shein, yet in essence the same infrastructure. The sector could take its next bold step now - replicating this and widening competition to the household market - bringing innovation and customer choice to the forefront. Our own national research conducted in April 2025 shows that appetite for switching is comparatively high, with half of water consumers saying they would switch in the next year if given a choice. Price was not the only factor motivating customers. Three in five customers say the option to buy new products and services that help save water would be important in their decision to switch supplier, and half say they would pay more for sustainably sourced water.

We believe that driving competition would unlock the fairer water charges for customers, and would pave the way to remove the regulatory blockers to innovation. Whatever the Commission concludes at the end of this process, the raw ingredients are all here and that is a reason to be optimistic for the future.

Call for Evidence

Q1. Would you like your response to be confidential?

No

Q2. If you answered yes, which information would you like to keep confidential and why?

N/A

Q3. Do you consent to being contacted by the Independent Water Commission about your response?

Yes

Q4. If you consented above, please provide your full name.

Iain McGuffog, Director of Regulatory Finance

Q5. If you consented above, please provide your email address.

finreg@southwestwater.co.uk

Q6. In what capacity are you completing this consultation?

As a representative of a water company

Q7. What is the name of the organisation or interested group that you are responding on behalf of?

Pennon Group plc, the owner of South West Water, Bristol Water, Bournemouth Water, Isles of Scilly Water, and Sutton and East Surrey Water

Q8. Where do you live?

England

Q9. Where does your business or organisation operate?

England

Section 2: Overarching Framework for the Management of Water

Q10. Thinking ahead to what you would like the water system to look like in the future (e.g. in 25 years' time), what outcomes from the water system are most important to you? Please select your:

First priority: Resilience to climate change

Second priority: Wider public health outcomes (e.g. limiting anti-microbial resistance)

Third priority: Water bodies being safe for swimming and other recreational uses (e.g. kayaking, paddleboarding)

Q11. To what extent do you believe the overall water framework already delivers the outcome you chose as your:

Highest priority? To some extent

Second highest priority? To some extent

Third highest priority? To some extent

All of the priorities listed in the questionnaire are important. We believe the top three priorities are:

- **Resilience to Climate Change**: This priority is foremost given that climate change poses the greatest threat to water systems, and adapting our infrastructure and strategies is essential to ensure the safety, reliability and sustainability of water supply; to protecting the environment; and to supporting communities.
- **Wider Public Health Outcomes**: Ensuring safe and clean water is customer number one priority, and therefore it is our number one priority. It is essential for public health. This is not just about what we do today, but also how we look at future risk such as anti-microbial resistance which can compromise the effectiveness of water treatment processes and pose significant health risks.
- **Water Bodies Safe for Recreational Uses**: In Devon and Cornwall preventing pollution and ensuring bathing waters are clean and safe for customers and tourism is critical to communities and the economy – and for our customers a top priority (second only to ensuring a clean safe supply of water).

To ensure these objectives are prioritised and delivered effectively, it is essential to adopt a framework that places the needs, priorities, and expectations of customers — including future generations — and communities at its core. This requires meaningful engagement, not only to shape decisions but to recognise the important role that customers and communities play in delivering outcomes.

Central to this approach is the integration of these priorities into long-term catchment and business plans through clear, transparent processes. We support a shift toward evidence-led, risk-based regulation — an approach that has proven successful in maintaining drinking water quality and should now be extended to environmental management. Key planning tools such as Water Resources Management Plans (WRMPs), Drainage and Wastewater Management Plans (DWMPs), and Long-Term Delivery Strategies (LTDSs) should feed directly into national policy, helping to identify strategic risks and ensure coherence between planning and delivery.

Our experience consistently demonstrates that customers are prepared to support investment — including bill increases — where there is a clear, well-evidenced case for the environmental and broader societal benefits that will be achieved.

While the priorities identified are each significant, they are also interconnected. Effective response demands a systems-based, resilient approach, focused on outcomes and capable of addressing the growing challenges posed by environmental constraints and evolving social expectations.

In this context, we welcomed the introduction at PR24 of the requirement for companies to develop 25-year long-term delivery strategies — a proactive step that builds on the approach we had already adopted at Pennon during PR19.

The case studies below provide additional information around our top three priorities:

Case study 1 – Climate Change - The risks to water company assets from climate change

According to the 2021 Intergovernmental Panel on Climate Change (IPCC), we are already experiencing climate change impacts today – including of drought, rising temperatures, flooding, rising sea levels and storm surges, and coastal erosion on our operations. For example:

- In 2022, the UK experienced a severe national drought.
- The following year, as well as a series of named storms and weather warnings that led to flooding and power outages, June 2023 recorded the hottest day ever. In 2023 alone, there were 11 named storms, compared to just 5 in both 2021 and 2022, and which resulted in 18 pollution incidents.
- In 2024, the South West faced the hottest February and May on record, along with the wettest February since 1836, resulting in record rainfall and flows. The region also experienced 9 named storms, including the first-ever Red warning for wind in December, which caused 21 pollution incidents.
- These extremes have continued into 2025, with the World Meteorological Organisation declaring January 2025 as the hottest ever globally.

The South West is particularly vulnerable to climate change, given its 860 miles of coastline, and adjacency to the western approaches of the Atlantic Ocean, exposing the area to impacts from rising sea levels and storm intensity. Given this, assessing climate change risks, and the potential impacts, and possible mitigations on our various operations, assets and networks, is an ongoing and iterative process.

By 2050 summers are forecast to be 2-3°C warmer, and by 2070 over 5% warmer than today - with at least 20 days of extreme heat. Higher temperatures will reduce rainfall by 14% with more thunderstorms – creating an abstraction deficit equal to 250k, greater than the size of Bournemouth Water.

A fivefold increase for in rainfall events and 17% increase in extremely wet days is forecast. Alongside, rising sea levels and coastal erosion present significant risks to our region. Major cities like Exeter and Plymouth, as well as the homes and livelihoods of thousands across the South West, are vulnerable. With 80% of our population and over 70% of our assets concentrated around the coastline, the impact is profound.

Applying forecast sea level rises to our asset mappings, we can see that without additional coastal flood defences our wastewater assets will be affected. Up to one in five of our wastewater treatment works are at risk of inundation along with 200km of sewers. 10% of catchments are at risk of sewage flooding in a severe storm by 2050, and the annual damage due to floods is forecast to increase by up to 50%.

- To help support these challenges, the South West is committed to becoming the first net zero carbon region in England. This ambitious goal involves various initiatives, including energy project development, housing retrofits, and public sector decarbonisation. SWW, for instance, aims to achieve net zero operational carbon emissions by 2030.

Case study 2 – Public Health – safe, clean drinking water is customers' number one priority – catchment level challenges need to be addressed to ensure water quality remains world class.

Microbial contamination in water systems can pose significant health risks. Across England, the quality of drinking water is generally high, with 99.98% of public water supplies meeting regulatory standards, and according to the Yale University's Environmental Performance Index, which tracks 40 performance indicators—including "Sanitation & Drinking Water"—the UK is a joint global leader in drinking water quality.

However, waterborne pathogens and bacteria can still pose threats, especially in water distribution systems where biofilms can form. Effective water safety planning and targeted regulation are crucial to maintaining high water quality and preventing microbial contamination.

Microplastics are an emerging concern in water systems. Water UK reports that 99.9% of microplastics are removed from drinking water through treatment processes.[1] However, microplastics still enter rivers and the wider water systems from various sources, including the breakdown of larger plastics and particles released from synthetic materials and microplastics are in all of our rivers.[2] These microplastics can accumulate in riverbeds, posing risks to aquatic ecosystems and potentially entering the food chain.

SWW and its parent company, Pennon Group, are actively working to improve water quality and address environmental concerns. For example, together with the University of Exeter, SWW has established the Centre for Resilience in Environment, Water and Waste (CREWW) to research the most important challenges faced by the water sector today. CREWW has established a dedicated Microplastics Lab to enhance research capabilities and address gaps in understanding microplastics throughout the water cycle.[3]

Private water supplies – there are approximately 33,879 private water supplies in England, which serve 1.5% of the population. There is a higher concentration of these private supplies in some of our regions than other water companies. Whilst the level of quality should be the same as a public supply, as the expectations are the same, this is not always the case. In 2023, at least 5.98% of tests in England showed faecal contamination, 4.93% of samples tested were found to contain E. coli and 5.98% containing Enterococci.[4]

Fluoride – In 2024, a report to Cornwall Council's Health and Adult Social Care Overview and Scrutiny Committee said that the oral health situation in Children in Cornwall showed a concerning deterioration as they got older. Similar concerns were raised in Plymouth in early 2025. SWW does not currently add fluoride to water. In England and Wales, less than 10% of the population have fluoride added to their water, mainly in the West Midlands, North East, and North West of England. The Water Supply Regulations 2010 allow a maximum level of 1.5 milligrams of fluoride per litre. At SWW, our water has a low naturally occurring level of fluoride that is below 0.1 milligrams per litre.[5]

[1] Water UK - Ground-breaking research shows 99.9% microplastics are removed from UK drinking water

[2] Friends of the Earth, Microplastics found in every British river we tested
[3] Centre for Resilience in Environment, Water and Waste – Microplastics Lab
[4] Drinking Water Inspectorate, Drinking Water 2023 – Private water supplies in England
[5] South West Water, Fluoride in your water – water quality fact sheet 3

Case study 3 – Ensuring water bodies are safe for recreational use depends on shared responsibility across all stakeholders, not just water companies.

Our regions are distinctive, largely rural, and environmentally rich. In Devon and Cornwall there is 157 bathing waters—over a third of England's total—alongside 860 miles of coastline, 4 national parks, and 11 designated Natural Landscapes, in an economy the size of Greater Manchester. We also serve key urban centres in Bristol, Exeter, Plymouth and Poole, and underpin major regional industries in tourism, fishing, and agriculture. Through SES Water, we serve Gatwick Airport.

As part of our AMP8 business planning, we engaged customers to identify their top priorities.[6] The Top 10 are shown. Environmental protection ranked just behind the delivery of clean, safe drinking water, with particular concern for reducing pollution and safeguarding bathing waters.

Natural assets are not only important to residents—they are central to our tourism appeal. Eight in ten visitors to Devon and Cornwall come to enjoy the beaches and coastline, making the protection of water bodies essential for both community wellbeing and economic sustainability.

We've made significant progress in improving bathing water quality. In 1991, in Devon and Cornwall, 28% of bathing waters met Excellent standards compared to 83% excellent in 2023, with 100% passing the stringent tests where we have assets. These figures reflect the official bathing season – which runs only from May to September. Given year-round usage by both locals and tourists, we advocate for extending the bathing season to reflect this reality.

Increasingly we are seeing more communities wanting to use rivers for recreation, and we have four new inland bathing waters in Devon and Cornwall. Overall, in terms of river quality the water industry is responsible for 12.4% of the Reasons for Not Achieving 'Good' ecological Status (RNAGS). The greater challenge lies in diffuse pollution—from urban runoff and airborne contaminants—which requires collaborative, cross-sector innovation.

We play a vital role in catchment management, working with partners to improve land and water stewardship. This includes reducing agricultural runoff, enhancing soil health, and promoting sustainable land use. Our peatland restoration projects are a key part of this strategy. By rewetting and rehabilitating these natural ecosystems, we reduce greenhouse gas emissions, increase biodiversity, and improve water quality and retention—helping to mitigate stormwater impacts and pollution at source.[7]

[6] South West Water - PR24 Business Plan – What we have heard from customers and communities

[7] South West Water - Pollution Incident Reduction Plan April 2025

Q12. Who do you believe should be responsible for making decisions about what outcomes to prioritise from the water system?

The water system serves a range of critical, and often competing, outcomes that need to be carefully balanced. It exists to protect public health, ensure resilience to climate change, and support environmental quality, amenity, and economic growth. Yet the current framework is not designed to manage these trade-offs effectively. Responsibilities are fragmented, regulation is inconsistent, and water companies are often held accountable for outcomes they cannot control. This structural weakness limits delivery, drives inefficiency, and erodes public trust. Our customer research for Devon, Cornwall, and Bournemouth shows a decline in customers that state they have trust and confidence in South West Water from a high of 93% in 2021 to 89% in 2023, with satisfaction with openness and transparency declining from 77% to 64% over the same period.

Public health remains the primary outcome—ensuring the supply of clean, safe drinking water and managing wider health risks such as microplastics, PFAS (forever chemicals) and antimicrobial resistance. At the same time, the system must build resilience to climate change on both water availability and quality. Maintaining ecological integrity is equally essential—supporting biodiversity and sustaining healthy ecosystems while meeting human needs. The water environment also delivers important social value through access to safe, clean bathing waters and recreational spaces. Water infrastructure underpins economic growth, supporting housing, business development, and sectors such as tourism, fishing, and agriculture.

Our own experience across Devon and Cornwall, the Isles of Scilly, Bournemouth, Bristol, Sutton and East Surrey demonstrates how these outcomes interact at the local level. In our 2023 Drainage and Wastewater Management Plan for Devon and Cornwall, we worked with over 20 partners to co-design catchment-based solutions—an approach that has proved essential in balancing environmental outcomes with growth and resilience.[8]

Balancing these outcomes requires clear decisions on prioritisation, trade-offs, and shared responsibility across sectors. Government should set long-term outcomes, affordability envelopes, and investment priorities, supported by regulators and delivered by companies.

This process should also reflect the fundamentally different nature of water supply compared to wastewater and environmental outcomes. Water supply—including water resources, drought resilience and drinking water quality — is infrastructure-led and best governed through a national framework. In contrast, wastewater and environmental outcomes are shaped by local conditions and diffuse pollution sources—from agriculture, highways, urban growth, and household misconnections. Water companies cannot tackle these challenges alone. In the last five years, we have investigated 1,200 potential pollutions not caused by our operations, including 300 illegal misconnections into the network. We also deal with c.230 third party strikes on our water network each year, each with the capacity to cause major disruption and outage for customers. Water companies are liable for these outcomes, even when they lack the statutory powers to prevent or enforce against them.

We support Professor Dieter Helm's recommendation to split water and wastewater licences to reflect these governance differences.[9] Licence reform should be matched by statutory powers equivalent to those held by energy infrastructure operators like National Grid, ensuring that accountability and authority are aligned.

To maintain coherence between national targets and local delivery, we propose that within twelve months of the Commission reporting, Government publish a Water White Paper setting out clear, long-term outcomes for water companies, regulators, government, public bodies, and other sectors. We also recommend an ongoing role for a Water Commissioner within government. This independent role would oversee the national plan for water, manage trade-offs, and hold all sectors—not just water companies—accountable for their role in delivery. Crucially, the Commissioner would also ensure that regulators operate to shared metrics and strategic priorities, resolving overlaps—such as between Ofwat and the EA on environmental delivery—and addressing underlaps

[8] South West Water – Drainage and Wastewater Management Plan 2023
[9] Dieter Helm (April 2025), From the unsustainable to the sustainable: how to reform water and sewerage in England and Wales

where no party currently holds responsibility, including areas like bioresources, highways pollution, and third-party impacts.

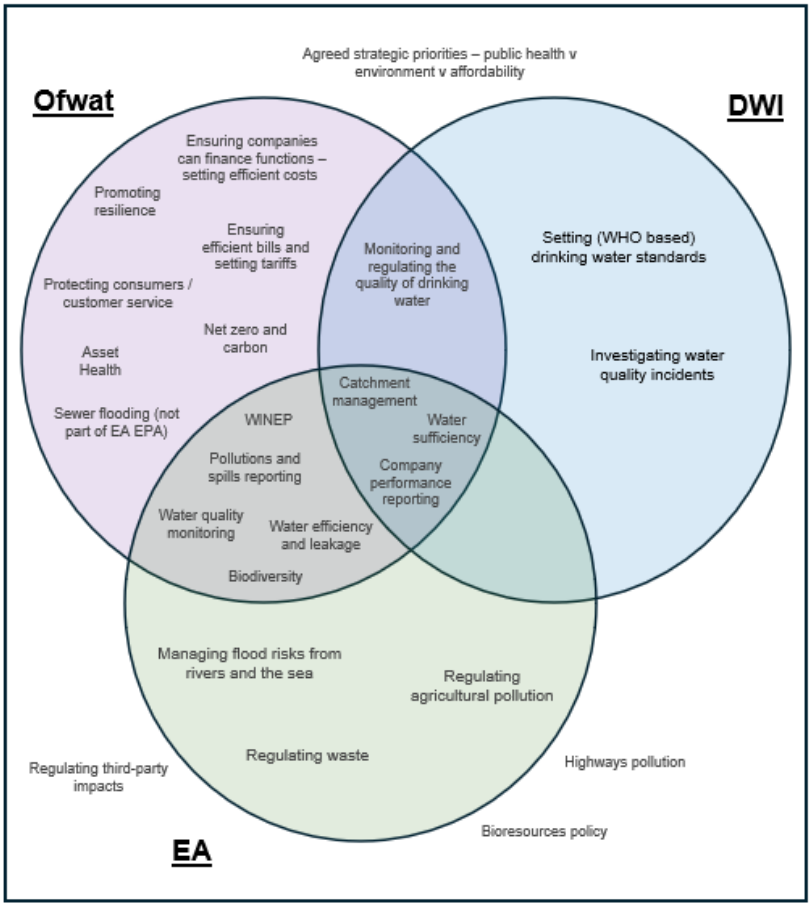
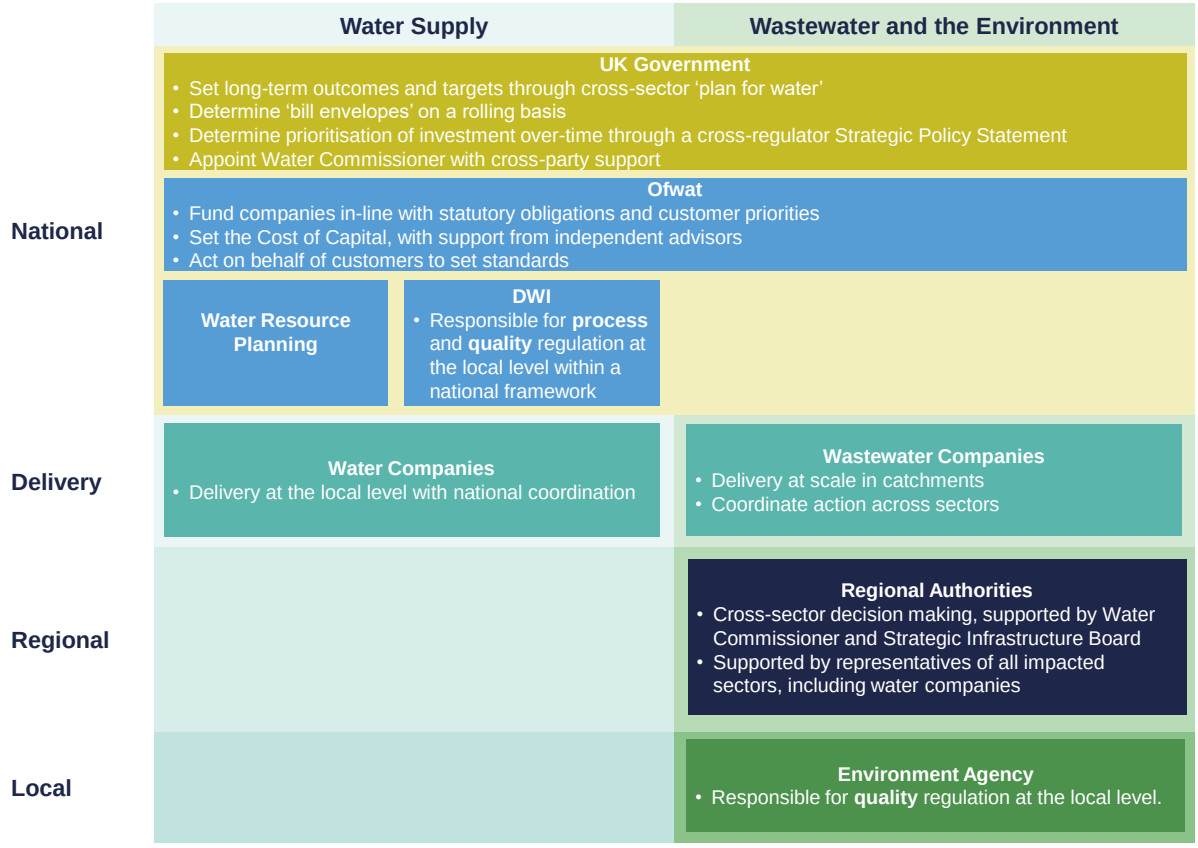


Figure 1 Overlaps and gaps in regulatory bodies

Q13. Do you believe there should be changes to roles and responsibilities for water management across local, regional and national levels?

Yes, we believe changes are needed to improve coordination, clarify roles, and rebalance powers and accountability across all levels of water management. We believe the current system is fragmented and lacks accountability across sectors, and a clearer, more coordinated structure is essential as climate change, population growth, and environmental pressures intensify.

Figure 2: Pennon's proposed Wholesale Governance model:



Water supply is best managed within national frameworks—many of which already exist—but there remains room for refinement, particularly around integrating environmental outcomes and long-term resilience.

Wastewater and water quality, on the other hand, is inherently local and effective management happens at the catchment level. Water companies rely on local stakeholders including landowners and water users to co-develop plans. Pennon would support Dieter Helm's suggestion of catchment-level regulation to supervise this process and formalise the Catchment Partnership approach Pennon has pioneered.[10]

Well-governed partnerships such as the Mendip and Bristol Avon Catchment Partnership and the work SWW has done in Coombe Martin, Devon to improve bathing water quality show what's possible when roles are clear and collaboration is strong (Case Studies 2 & 3). But this process would be better formalised rather than relying on goodwill to ensure a consistent approach, see Case Study 4 on Argal Reservoir in Cornwall for an example of how a lack of cooperation and enforcement powers results in poor water quality despite 12 years of catchment-based interventions to reduce pollution.

Catchment working needs to include local communities. For example, local coordination enabled success in Coombe Martin in North Devon, where a combination of hard and soft engineering improved water quality at a previously failing bathing water site (see Case Study 3).

At the national level, Government should set the affordability envelope, resolve trade-offs on bills/affordability, resilience, and service ambition—ensuring coherence across sectors. Government must also set the strategic priorities for regulators. Risk-based and proportionate regulatory oversight is essential. Efforts to build Cheddar 2 in the Bristol region commenced over a decade ago, however the case could not be made at the company level

[10] Dieter Helm (April 2025), From the unsustainable to the sustainable: how to reform water and sewerage in England and Wales

and it was not until a more strategic planning approach was introduced that the case was made for the new reservoir to solve local deficits across the South West region (see Case Study 5 below).

In addition, government and regulators need to address the mismatch between liability and power, whereby companies are held strictly liable for outcomes — even when they have no statutory authority to act, such as in cases of illegal connections or third-party damage. Organisations like National Grid benefit from statutory duties and enforcement powers that allow them to manage risk proactively (see Case Study 6). Water companies need a similar framework to manage infrastructure effectively and equitably.

For the water environment, regional coordination bodies — such as mayors or designated authorities — should be empowered to deliver national outcomes locally, monitor cross-sector delivery, and hold all parties to account. Where formal structures do not yet exist, unitary authorities or county councils could fulfil this role[11]. These bodies are critical to aligning local plans with national priorities.

Within this framework for the natural environment – at the local level, roles should focus on delivery. Catchment partnerships work well but need more formal backing and funding. Wastewater companies, local authorities, landowners, and communities should co-develop and implement solutions, supported by better data sharing, clearer lines of responsibility, and engagement with customers and communities. SWW's Plan for Water with Plymouth City Council and the EA, and the support for Falmouth's Charter of the Sea, illustrate how environmental water management can be community-led, integrated, and locally accountable (see below Case Study 7 for more information on our work with partners).

As the evidence provided shows, effective management of water is crucial to achieving water systems outcomes, and requires making informed decisions and ensuring efficient delivery. Further, while long-term water supply planning is best handled at the national level, managing water environment outcomes requires a more localised approach to address specific regional needs and conditions.

It is not widely known that significant investments in water resources are often aimed at environmental protection rather than economic growth and water consumption. The public and stakeholders often misunderstand the purpose of these investments, which are not intended to build headroom but to maintain the level of water in the natural environment.

Customers often associate water resilience and resource investment with short term supply interruptions. There is a link in drought situations, but investment in water resources and duplication of water systems for supply resilience is unlikely to be enough without the involvement of other sectors. Case Study 10, on the third-party caused supply interruption at Carland Cross, shows the jeopardy that arises with all the governance and enforcement being focused on water companies rather than local engagement and accountability also to third parties.

Case study 4 – Catchment partnerships demonstrate successful catchment management.
Bristol Avon Catchment Partnership This is a multi-sector project, with regional and local authorities looking to develop ecological corridors as part of climate and ecological emergency responses. This supports water resources in addition to existing catchment management through the Mendip Lakes Catchment Partnership. Our historical archives suggest that the earliest indication of algal blooms in reservoirs, impacting water treatment and supply quality, was identified by Bristol Waterworks on Chew Valley Lake. To tackle this there has been a longstanding catchment management project in the Mendips, the data set for which has been used in Ofwat's innovation fund.

[11] Sustainability First - SWW-sub-regional-governance_Slides.pdf

Devon and Cornwall - Upstream Thinking

The Upstream Thinking programme comprises 16 schemes and 5 investigations across 18 catchments. In this time, and working with our partners, over 144,000 hectares of land have been restored and over 330,000 trees have been planted.

Much of the work involves working directly with farmers to help highlight opportunities where improvements could be made to their operations for the betterment of water quality and biodiversity. For example, a farm bordering the River Lumburn in Devon recently received a Green Recovery grant to support (among many things) the building of a new covered farmyard manure store. When stored incorrectly, manures can be significant sources of water pollution. The building of a new covered store helps to prevent this issue.

Cost benefit analysis of catchment management

SWW identified multiple ecosystem service benefits for partners through the value of increased water availability, biodiversity, landscape protection, sustainable agri-economies, and flood risk management.

The original cost benefit analysis in 2007 for upstream catchment management was based on the "Mires-on-the-Moors" projects that restored upland Exmoor and Dartmoor areas. This helped to support the natural refill of water resources in Wimbleball Reservoir. Our original 65:1 benefit to cost ratio calculated in 2007, that allowed the pilot, showed that a regional water catchment planning framework can work across stakeholders to build this for the future.

The original pilot was funded by Natural England, University of Exeter, Natural Environment Research Council and EA match funding. It was included as a pilot at PR09 based on the benefits being delivered through investigating peatland restoration, the potential water quality benefits from reduced organic material from deteriorating peatlands into reservoir and river water, supply benefits into the River Exe, biodiversity and habitat improvements, in particular for SSSIs. The learning from this and other catchment projects has helped to support other partnerships, in particular the establishment of CREWW with the University of Exeter.

£1m of investment from SWW was intended to support £7m from other factors. In practice there has been limitations in catchment management in terms of the availability of matched funding and to scale up the model over a wide enough area. For example, across AMP7, we have invested c. £25m in our catchment management schemes. This was supported by only £1m from external partners.

Case study 5 – Combe Martin, Devon - hard and soft engineering resulted in improved water quality at a previously failing bathing water site.

Combe Martin faced potential declassification for bathing water due to bacterial pollution – which concerned the local community who depend on the beach and bathing water quality to attract visitors. Partnership work has delivered a nature-led approach to reducing flood risk and increasing water quality and biodiversity in the catchment.

The River Umber flows into the sea at Combe Martin beach and can affect bathing water quality, especially during wet weather. SWW has helped lead the way in a number of environmental improvements after joint investigation work with the EA found that multiple sources of pollution were having significant water quality impacts in the Combe Martin area, particularly agriculture and dog waste.

To combat this, the company deployed soft engineering solutions, such as planting thousands of trees along the River Umber's edge, creating woodlands to protect the River Umber from bacteriological run-off from the steep-sided valley. Planting thousands of native trees and hedges in the catchment intercepts peak flows of rainfall in the valley, improving both soil health and water quality. We have worked proactively with farmers to provide advice on soils and waste management, resulting in a decline in fertiliser and slurry run-off into the river, and more awareness has been raised locally about the negative impact dog waste can have on water quality.

These catchment actions complement hard engineering improvements – including the construction of underground storage tanks to reduce the number of storm discharges into the River Umber during extremely wet weather. Teams have also worked on a range of measures in the North Devon village, such as sealing 19 manholes and lining 250 metres of sewer, to prevent ground water from entering sewers and adding unnecessary strain on the network. Overall, this has led to a 68% reduction in storm overflow spills in the area since 2019.

These combined efforts with the EA and local community have successfully upgraded Combe Martin's bathing water classification, as set by the EA, from 'poor' in 2019 to 'good' in 2022 and 2023 benefiting the community and visitors.[12]

Case study 6 – Argal Reservoir demonstrates poor catchment management and a lack of enforcement where water users shy away from collaboration.

Our experience at Argal Reservoir highlights the limits of currently joint working arrangements. Despite 12 years of catchment-based interventions to reduce nutrient pollution, ecological improvements remain limited due to insufficient cross-sector cooperation and lack of enforcement power.

Argal reservoir provides water to homes around Penryn and Falmouth. Since 2012, the reservoir has consistently fallen within the "poor" category for the WFD classification[13]. Algal blooms and eutrophication related issues were major problems in the catchment, alongside the impacts of pesticides.

To tackle this, we have been working in the catchment alongside Cornwall Wildlife Trust under our Upstream Thinking initiative. We have engaged with farmers to offer advice and provide capital grants aimed to improve practices. We have also supported farm businesses into Countryside Stewardship schemes to undertake better management for the reduction of soil and nutrient runoff into the reservoir. We have also brought semi-natural habitant into better management for water and wildlife benefits.

Whilst there have been marked improvements in some parameters, the waterbody once again received a rating of "poor" during the EA's Cycle 3 classification process. Half of the Reasons for Not Achieving Good ecological Status (RNAGs) are due to pollution from farming activities. This contributed towards total phosphorus, phytoplankton, and chironomids levels within the waterbody. As a result, whilst we will continue to work in the catchment, we are now required to invest in more hard-engineering solutions for water quality, which is a cost being borne by SWW customers.

Case study 7 – Cheddar 2 - Pennon is taking a strategic system planning approach to solve local water deficits.

Three of the 30 national strategic water resource projects currently being progressed through the RAPID framework are in the South West region. They are being developed jointly with Wessex Water through our joint regional West Country Water & Environment Group, which has an independent Chair and includes regulators and other water user representatives.

The development of Cheddar 2 started over a decade ago, when first suggested by Bristol Water who recognised its strategic importance. Bristol Water itself has no need for Cheddar 2 for its future water resources – as confirmed by the CMA in the references by Bristol Water from Ofwat's decision not to fund its development at both PR09 and PR14. However, when Pennon bought Bristol Water in 2021, it promoted the scheme on the basis that Cheddar 2 could serve the needs of the wider South West, to support growth and abstraction reductions elsewhere in the region.

The scheme will use an existing abstraction licence in the Bristol Water area at Cheddar Springs, supplemented by a river abstraction. A c.55km pipeline will transport the water into Wessex Water's supply area via Bridgewater, passing through an area of strategic industrial growth in Somerset. From Bridgwater, the water will be transported to support supplies in North and East Devon, leaving more water in dry periods in the existing Wimbleball Reservoir, which is an existed shared resource with Wessex Water.

With this extra water in the Wimbleball Water Resource Zone, we can use our existing raw water transfers across Devon and Cornwall, supporting the entire peninsula for both growth and the effects of climate change on future droughts.

It is essential that Cheddar 2 progresses quickly through design, procurement and planning, given its contribution to water supply resilience and economic growth. The RAPID gateway process and Direct Procurement for Customers (DPC) model looks at each scheme individually. This could be complex, particularly with three schemes in the region that need to operate as part of the system as a whole. Pennon is exploring alternative frameworks to individual

[12] South West Water - DWMP Our Plan
[13] Argal Reservoir | Catchment Data Explorer | Catchment Data Explorer

project construction and financing arrangements with Ofwat to simplify the approach to the construction, financing and operation of these important projects.

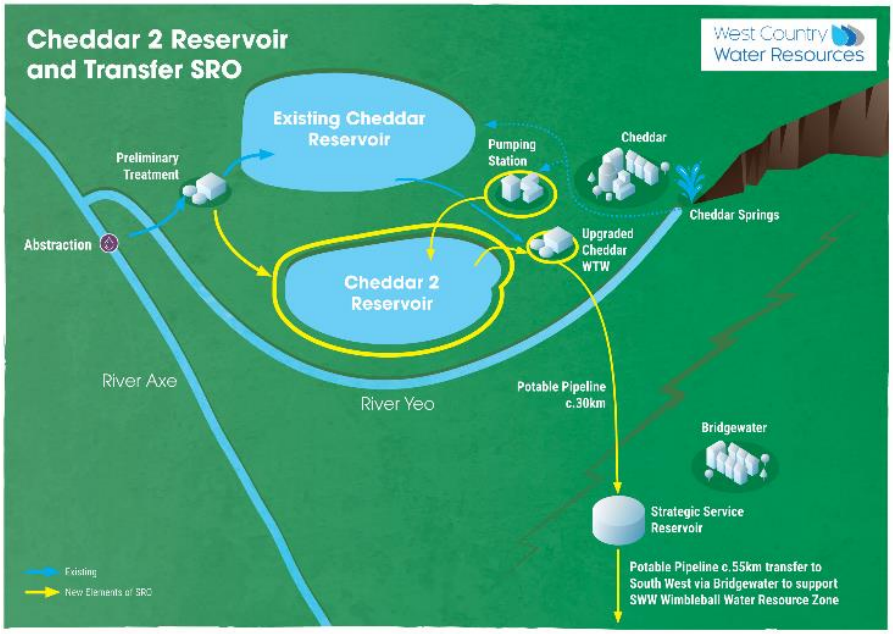


Figure 3. Cheddar 2 Reservoir and Transfer SRO.

Figure 4. The movement of water from Cheddar 2 to serve the South West region.

Case study 8 – Water companies have strict liabilities, they require the matching statutory powers to deliver the outcomes.

Critical National Infrastructure are those facilities, systems, sites, information, people, networks and processes that are necessary for the functioning of society. The Government lists the water sector as one of the 13 national infrastructure sectors but does not afford it the same powers as other sectors, such as energy.

Up to 25% of wastewater pollutions across Devon and Cornwall are caused by blockages, with sewer misuse a factor in the majority of blockages. The cost to remove blockages and the build up of fibrous materials at wastewater treatment works falls on customers. At SWW's Countess Wear wastewater treatment works in Exeter, we collect more than 140 tonnes of fibrous material every year, filling four skips per week.

Defra estimates between 150,000 to 500,000 properties in the UK have misconnections[14,15]. We have investigated 1,200 potential pollutions over the last five years that were not caused by us, including 300 misconnections into our network. The liability for misconnections sits with property owners, but homeowners should have a recourse to take action against those undertaking work on their behalf in the event of a misconnection. Too often, unsafe misconnections to our networks are treated as 'out of sight and out of mind'. This would be unthinkable in the case of gas and electricity misconnections.

Our clean water network is also impacted by third party excavation strikes and damage. Pennon typically repair around 230 assets every year as a result of third-party damage to our drinking water networks.

Government has made the decision to deliver 1.5 million new homes by 2030, through reforming planning laws, challenging local authorities to deliver more ambitious local plans across England, and supporting large-scale new towns. Based on ONS local authority housebuilding data, on average, the South West on average delivered 12% of total homebuilding in England between 2009 and 2023. Applying this average to the Government's target of 300,000 homes per year, infers annual housing delivery in the South West will be of c.35,000 per year between 2025 and 2030. This is more than double the historic average of c.16,400.

To support the Government's targets, we will need to invest in the capacity of our networks, in advance of need. To do this with confidence, we need an integrated system of planning, which allows for coordination across water companies, local authorities, landowners, businesses and property developers. While we already work closely with local authorities in our region, we are not a statutory consultee for new developments. We would also benefit from a more formal system of governance for infrastructure investment at the regional level, mirroring the successes of the Greater London Authority and Greater Manchester Combined Authority, among others.

To achieve this Government should confer 'national' status on our water and wastewater infrastructure, providing companies with the powers they need to prevent illegal third-party damage to the water and sewerage networks. The Government should also establish professional standards for drainage engineering, with formal accreditation for engineers, and a requirement for connections to be registered

Case study 9 – Co-development of plans for community-driven improvements to bathing waters

Partnership working is absolutely central to our approach at SWW. There are many factors that can impact water quality in our rivers, reservoirs and seas, and for years we have been working with local partners and landowners to tackle these challenges.

Below are two examples of where we are working with local communities to support the work we are already doing in their areas.

Plymouth Sound

In Plymouth, we have signed a collaborative agreement with Plymouth City Council[16] and are already working in partnership with them and other key partners (e.g. the EA) to develop a 'Plan for Water' for the city.

Our collaborative approach seeks to build and expand on existing good practice in Plymouth, such as the Integrated Urban Drainage Modelling Project and take a holistic and place-based approach to water management

[14] House of Commons - Environment, Food and Rural Affairs Committee - Written Evidence
[15] Drain Misconnections Threaten Our Rivers | The Rivers Trust
[16] Memorandum of Understanding between SWW and PCC

to create a Plymouth Plan for Water. Our purpose is to meet the future water management challenges jointly and collaboratively. This includes a commitment to:

- further develop a shared understanding of the challenges faced in Plymouth, especially with reference to increasing climate change impacts.
- identify further synergies and partnership opportunities between our planned investment programmes and wider working.
- work together to identify more holistic solutions with greater impact and with a focus on developing a 'Green First' approach to water quality improvement project development.
- enabling greater levels of community engagement, understanding and community codesign of solutions to water management.
- deliver investments and programmes in a more integrated way to maximise the benefits (including wider social, environmental and economic benefits) and mitigate risk.
- identify and address critical gaps – for example resource gaps through shared bids or developing innovative financial models for investment gaps; and
- jointly explore wider opportunities and levers that can support our shared ambition e.g. with other key city partners and national stakeholders.

Falmouth

Charters of the Sea have been developed by Cornwall Wildlife Trust.[17] There is already one in place for Mounts Bay, and there is currently one being considered for Fal and Helford.

The Charters are plans of action to promote nature recovery in the local marine environment – created and developed by the communities that live and work in the area. This includes local marine conservation priorities; current actions and community projects; and what resources and capacity there are in the local community.

Cornwall Wildlife Trust are currently surveying the community to understand their top 10 conservation priorities for the Charter.

[17] Cornwall Wildlife Trust – Charter of the Sea

Case study 10 – Addressing the impacts of the 2022 Drought in Cornwall and Devon through strategic investments, collaborative efforts, and the navigation of regulatory hurdles.

2022 saw some of the hottest, driest weather on record as a consequence of climate change.

A combination of a lack of rain – the 4th driest summer in 130 years – combined with record breaking temperatures created a 1-in-200-year event. Combined with low levels of soil moisture and increased demand exacerbated by the impact of the pandemic and heatwaves, this put pressure on the strategic reservoir at Colliford, Cornwall and on the Upper Tamar reservoir in Devon, part of the Roadford Water Resource Zone.

Until 2022, our approach to resource planning delivered 26 years without restrictions on use, such as temporary use bans, and had met the challenges of increased COVID-19 demands and demand spikes produced by extreme heat and extreme cold, such as the 2018 'Beast from the East' event.

Significant efforts were deployed to safeguard drinking water supplies whilst protecting the Environment, with deployment of a number of Drought permits and water efficiency campaigns whilst working closely with stakeholders and customers. At the same time increased activity to reduce leakage and ensuring water losses were minimised.

Importantly, no-one served by Colliford or Upper Tamar, or across our region, or visiting our region, suffered a loss of supply or dips in water quality. At the same time, we maintained the environmental compensation releases from our reservoirs throughout 2022, essential to river health, and have continued to do so in dry periods of 2023.

We worked intensively alongside the EA and Defra, but the process that the EA is legally required to follow is slow and bureaucratic. It did not allow either party to work at pace, even in the case of the Upper Tamar where there were particular concerns around supplies to customers.

The Tamar region has two interconnected lakes, the Upper Tamar Lake is used to provide supplies to customers and to compensate the River Tamar in dry conditions. With a serious water shortage in the Tamar region SWW applied to reduce compensation flows to the river from Upper Tamar and also to start to abstract from Lower Tamar Lake – which was full at the time of application (as it is not used for water supplies or compensation flows to rivers). Following a length regulatory and consultation process that took weeks, we were granted the applications, albeit for shorter times and volumes than requested. There is no way currently to address this inflexible regime, even when all parties involved want to work at pace.

Since 2022/23 we have invested to secure the equivalent of 25% demand in Cornwall and 12% in Devon. We can show that, whilst the circumstances in this one area were challenging, culminating in a worse than 1 in 200-year event, our actions were appropriately timed, and we are now more resilient across the region. This includes investment in disused quarries such as Blackpool Pit and Hawks Tor in Cornwall; new and enhanced winter pump storage investment at Restormel and Kennall Vale in Cornwall and the river Lyd and Gatherley in Devon. A new water treatment works has been built at Coswarth near Newquay to utilise water from the river Porth and we are at detail design stage of delivering a 20 million litres of water a day desalination plant in Cornwall.

Together with drought permits and focusing on demand side actions, such as the 'Save Every Drop' and fixing customer-side leaks for free, this has meant that from the lowest point of water resources levels at the end of October 2022, storage is now above last years in all our reservoirs

In AMP8 we will continue to build resilience, progressing the new Cheddar 2 reservoir for the South West region and interconnectors to better move water around the Devon and Cornwall region.

Case study 11 – Carland Cross: the impact of a third-party strike on our water supply.

In August 2021 a large part of West Cornwall was at significant risk of long supply interruptions over the bank holiday weekend when a third-party contractor laying an energy cable damaged the water main which was a major water supply pipe for the area – as well as damaging the second water main that provides resilience.

The Cornwall spine main is the key trunk main supplying Cornwall. We also have a second large water main water – that is parallel to the primary main, to provide backup in case there is an issue or when the primary main requires maintenance.

Some further information about how this incident:

- The contractor used a mole plough to dig the trench through a field in which the mains are contained. They hit the first water main – and despite the huge volumes of water this created, they continued for another c.100m. The third-party team prioritised completing the project, rather than stopping and reporting the damage they had caused. However, they hit the backup main – at which point the volumes of water was so great they had to stop.
- If the contractor had halted work after damaging the first main (rather than continuing to finish their work and in the process damaging the second main) the duplicate mains would have provided the required resilience and no customers would have been affected.
- SWW had previously shared plans with the location of the mains with the energy company that was installing wind turbines and had offered to help them locate and mark the locations before they started digging.
- When providing copies of the plan SWW had advised that the main should be located using trial holes or CAT scanning before any work commenced and they could contact SWW to assist if needed.
- Standard industry practice requires contractors to physically locate underground utilities, using scanning and trial pits, before they start work. If the contractor had followed this, the incident wouldn't have happened.

Up to 250,000 customers were at risk of interruption, however we deployed record numbers of direct staff and supply chain resources to deal with the event – over 250 staff in total – which minimised the impact on customers.

Ultimately, 20,427 properties suffered supply interruptions from this event. The majority of these were back on supply within a few hours. However, 3,305 properties had their supplies interrupted for over 12 hours. 833 of these (4% of the total) were out of supply for over 24 hours, while 24 properties (0.1% of the total) were affected for over 36 hours.

SWW paid compensation totalling £223,230 to around 3,492 domestic and 236 business customers who were impacted by the event.

In addition, we faced penalties of £8m due to failing to meet performance targets set by Ofwat (based on ODIs), despite it being accepted as being out of our control, it being uneconomic to have more resilience than the existing back up main, and the direct cause being third party damage.

In post-event research survey

- 90% of customers thought SWW's handling of the situation was acceptable
- 84% of customers thought the time taken to restore supplies was acceptable
- 67% of customers thought it was acceptable that water supplies were disrupted, given the circumstances of the event
- 97% of customers who received compensation were satisfied with the amount they received. Customers also appreciated how quickly the compensation was sent out.
- 80% of those that did not receive compensation were satisfied with SWW's approach to compensation.

Case Study 12 – The impact of poor collaboration between sectors on our plans for supply.

The Gatherley Roadford Pumped Storage Scheme is part of SWW's Water Resources Green Recovery Programme. The scheme aims to reduce water supply risks for the area supplied by Roadford Reservoir. This scheme was planned prior to the 2022 drought but was accelerated to bring into operation in 2024 to add further resilience to Roadford Water Resources Zone. In February 2024, we completed work to allow the delivery of up to 30Ml/day.

The Water Resource Zone (WRZ) is supported by the large strategic Roadford Reservoir, which can be used to supply all areas of the WRZ when needed. Under normal conditions, Roadford Reservoir provides direct abstraction to Northcombe Water Treatment Works, supplying areas of North Devon alongside local sources. In the longer term (Phase 2), it could also help enhance the resilience of the Colliford and Wimbleball WRZs.

This scheme is important as demand for water is increasing in the Roadford supply zone – and schemes that increase supply are needed alongside our demand reduction support. This supply scheme increases Roadford's resilience by moving more water into the reservoir during the winter, to recover its levels for the following summer. This ensures it can continue to provide optimal levels of water in a dry year.

Phase 1 of this project involved completing works to receive the 30MLD abstraction licence. This included the construction of a new pumping station on the River Tamar at Gatherley, Devon. Water is abstracted from River Tamar, and transferred via a 4 km raw water main to the River Lyd abstraction point at Lifton, then conveyed through an existing 7.5 km pipeline to Roadford Reservoir. This allows for transfers to take place during the winter months (November to March) when river levels are high, in order to refill Roadford Reservoir as needed.

Phase 2 of the scheme is set to provide Roadford reservoir with up to 111 megalitres per day. However, the water quality in the river from which we abstract is presenting some challenges. The complexity centres around the EA's concerns over the level of contamination of the River Tamar with pollutants, such as phosphorus and nitrogen, from diffuse pollution in the region. This is putting Phase 2 at risk. Given the fundamental need to protect customer supplies in the future, we continue to scope options and have engaged experts to establish baseline phosphorous and nitrogen levels.

Case Study 13 – Strategic planning, markets and governance in water planning

There are many attractions to a central systems planning function for water supplies, and this should be a clear long-term ambition. To get there it is important to recognise a specific approach to this developing in the water sector.

First of all, it is important to recognise the distinction between water, wastewater and bioresources. Wastewater involves local relatively small catchments for wastewater. Catchment planning and catchment management can be done at scale but this goes across different sectors, and wastewater companies are in a good place to work with catchment partners develop delivery plans.

Bioresources is in principle a national market but is limited by three factors – the current ban on co-digestion with other waste types, reliance on a recycling route to land and the economics of transporting sludge from remote sites to recycling plants. It is likely to remain regional in nature.

There is more scope for a national system planning for the water supplies. We have the DWI who ensures there is catchment regulation. For water resources, a national systems planner will be facilitated by licence and legislation reform to recognise the differences between water and wastewater / bioresources. There are two linked functions in the water service – water resources and water supply/quality. These functional splits within both water and wastewater are already recognised by Ofwat within the total RCV, with household and business retail also separate regulated activities all with different forms of regulation and competitive market forces as part of the regulatory landscape.

For water resources, there is a clear case for coordination of local plans into regional plans, experience of which should evolve into national systems planning. This planning is focusing on the major new water resource developments. As it currently stands though Ofwat look for a single lead company for these developments to give confidence to the supply chain and investors. There are several reasons for this, but one of the main ones is these new schemes are incremental to existing water resources. There are two challenges here – one is that water catchments share many of the same challenges as wastewater (e.g. flashier rainfall with climate change,

agricultural run off affecting the quality of reservoir and groundwater, forever chemicals such as PFAS affecting groundwater in particular and wastewater impact). The major water resource projects are driven as much by reflecting the forward projection of local abstraction permit reductions required by the EA to meet WFD and habitat obligations as supporting growth, given Government Environment Act targets expect reduced consumption against a 2017-2019 baseline. The other challenge is water supply quality – the same environmental pressures drive water quality investment required by the DWI to provide wholesale water, and this has to be maintained as the major projects are delivered. A national framework covering water resources and water quality will allow local delivery plans, across sectors and to evolve into regional coordination and national planning for water.

The skills required for systems planning are embedded in water companies and supported by their supply chain. They are also needed for future water resources and water quality local planning, day to day operations and drought planning. We suggest building on the existing regional water resource coordinated planning approach and developing this further – this is building regional hydrological planning, engagement with other catchment stakeholders, supply chains and is also looking at how to address water quality issues. Whilst the UK has the knowledge and consultancy service skill base, an industrial strategy for water delivery bringing standardised pipe and treatment technology solutions would also have a role to play.

For the West Country, we are exploring how the governance of regional water resources will evolve as our three major water resource projects are being developed, and as these projects move to delivery this will identify the scale of regional planning. Experience is being shared between regions and this will identify the pace at which we move towards national systems planning. We think the pace of this should depend on investor and supply chain appetite – if it supports the market for developing these schemes then there will be a stronger case and development for national systems planning, as would a move towards national household retail competition.

There is a difference from the formation of NESO which evolves out of National Grid's national network, and to start to resolve the challenges with local grid connections. The challenges we face with power supply and resilience are linked to local grid connections and this is currently something that remains a risk to our infrastructure delivery. We face incentive risk from lack of delivery from the energy sector providing infrastructure connections. It is not clear that the NESO model will resolve this at the local scale and for catchment planning in water similar issues may apply – hence we suggest a staged approach in moving toward national water systems planning.

The model we propose has worked in the past and effectively existed pre-1973. As an example Clywedog Reservoir in Wales was developed in the 1960s supported by a mix of public corporation water suppliers, private water companies such as Bristol Water and also supported economic growth with a share of the water facilitated by Bristol Water to ICI at Avonmouth. This was done through supporting the regulation of the River Severn through a systems planning authority whose functions in 1973 were split between the National Rivers Authority (subsequently the EA) and Severn Trent. Each major water resource scheme today will require its own specific governance features, but the principles of coordinated planning evolving into a national systems planner as the schemes develop is a logical way forward. Local actors can once again be empowered to operate this way.

Q14. Do you believe changes are needed to help reduce the siloed approach to water management across different sectors? If so, what changes do you believe would be beneficial? (Please select up to 5 options)

- Streamlining or aligning existing water plans and planning processes across the water system
- Increasing the status of water plans to influence other sectors (e.g. farmers, businesses, planning and development)
- Streamlining or aligning water management planning and other plans such as flood risk plans, local nature recovery strategies, and local plans for development
- Changes to how regulators regulate sectors involved in the water system (e.g. through monitoring, advice, enforcement, etc.)
- Other - Move to a national framework for water resources overseen by a water commissioner and delivered at a local level. Water quality and wastewater managed at a catchment-level

For water resources and drinking water quality, we favour a national framework for regulation. For wastewater and environmental services, we believe that there is an important role for regional authorities, and believe that regulation should be locally-focused.

Funding would not be an issue in moving to catchment level management. Over £13 billion per year is spent on environmental outcomes across 50 organisations, through 30 funding streams and 20 plans – this is fragmented with little coordination[18]. In Devon and Cornwall, SWW received £33m match funding from Partners against our core investment of £43m, with match funding from EU, Defra schemes and other sources. Combining all sources of funding to address all forms of pollution – wastewater services, agriculture, highways drainage, and surface water management would enable a comprehensive, integrated and market-led approach to improving water quality and reducing environmental impact across the region. This could align with the government's devolution aspirations, reflecting the role of devolved bodies and their links to nature and river health.

Q15. Do you believe there are barriers to money being spent more effectively and efficiently across different sectors to deliver the best outcomes for the water system? If so, what do you believe are the key barriers?

- Limitations of understanding of the full set of pressures (e.g. which sector is responsible for a pollution source)
- Limitations of alignment of existing funding pots (e.g. water company investment, agri-environment schemes, government funding for Catchment Partnerships)
- The scale at which actions are developed (e.g. actions are developed at too large or too small a scale, lack of spatially targeted actions)

Q16. In your opinion, is it more important that regional water system governance aligns with hydrological or local government boundaries?

- Hydrological boundaries (e.g. water catchments, river basin districts)

Q17. Do you believe changes are needed to the WFD Regulations, including for 2027 onwards? If so, which areas would benefit the most from change?

- The targets and objectives (e.g. 'Good Ecological Status' water body objectives, the designation of Artificial and Heavily Modified Water Bodies, the deadlines for achieving environmental objectives, the scale at which objectives are set and applied)
- River Basin Management Plans (e.g. spatial coverage, scope, the length of the planning cycle, the programmes of measures)
- The classification system (e.g. chemicals, ecological, groundwaters)

[18] https://sustainabilityfirst.org.uk/publications/briefing-papers/the-case-for-reform-in-water-governance/

- The way economic evidence is considered (e.g. cost benefit appraisals of actions, use of economic analysis to justify exemptions)
- Governance and accountability (e.g. the duties of governments and organisations)

Q18. If you feel the WFD Regulations would benefit from change, please expand on where you feel changes are necessary and the reasons why.

Achieving a high ecological standard is a significant challenge that will require all stakeholders to contribute and work together to deliver.

Currently, the national focus is heavily focused on the environmental impacts of water companies, with water company customers bearing the costs of addressing the various issues in rivers and seas. Yet water companies can often have a minor impact compared to agriculture and highways, which are frequently more significant. For example, and as noted previously, across the South West, 12% of RNAGs relate to water company operations according to EA catchment data, with 88% attributed to other sectors or no sector attributable.

The current WFD approach does not sufficiently assess trade-offs between ecological objectives and wider societal needs like food security, energy supply, or housing. Unlike drinking water, where the DWI enables a risk-based approach, WFD implementation lacks the flexibility to prioritise interventions that deliver the greatest environmental benefit.

We all agree that the Water Framework Directive (WFD) is crucial for protecting and managing water systems.

However, to make progress, it needs to evolve to be more forward-thinking, better able to address emerging threats like PFAS and microplastics. Updating the WFD must enhance our ability to monitor, regulate, and mitigate these impacts.

The framework should create long-term strategic plans that consider all impacts and needs related to water systems. These plans should provide a roadmap for all stakeholders involved in sustainable water management, setting out plans to address future challenges such as climate change, whilst ensuring resources are used efficiently and effectively. Water companies are vital components of this framework, and this approach would ensure that water companies and regulators are integrated into a comprehensive, holistic understanding and set of objectives.

The framework should also do more to engage the public and enhance the public understanding of the water environment. This is essential to promote a shift in consumer behaviour regarding water usage and to prevent sewer misuse.

The principle of "polluter pays" should apply. This is a significant gap. According to the OEP's 2024 review19, 75% of investment in improving water quality is currently made by the water industry and there is limited evidence that other sectors will deliver their share of improvements. We need to see increased collaboration and investment across all sectors.

For example, to date catchment management has involved subsiding farmers to reduce pollution and reduced scrutiny and costs for the sector than should be the case. And the impact of highways drainage on wastewater systems, particularly as an important cause of storm overflow discharges, is clear but highways do not pay for their use of the system, and there is no oversight from the Environment Agency of this important source of pollution. The impact is a distortion in both who pays and the incentives to behave differently and find solutions.

Reform should deliver a smarter, integrated catchment approach, supported by improved monitoring, aligned cycles, and tools such as catchment markets. Institutions such as CREWW can support better understanding of systems and more adaptive decision-making. Above all, reform must move away from a narrow compliance

[19] A review of implementation of the Water Framework Directive Regulations and River Basin Management Planning in England

model and towards a smarter, integrated catchment approach — grounded in robust monitoring, cost-benefit analysis, and shared accountability. All sectors must play their part, and all polluters must pay.

Case Study 14 – Partnering in innovation: the future of the industry.

Our 25-year partnership with the University of Exeter, CREWW, is working to resolve some of the most pressing challenges in the sector, not just in the UK but globally.

Our hope is that CREWW will become a beacon of change for the sector, whilst at the same time driving benefit and investment back into the South West as projects incubators for idea generation and commercial opportunities.

The dedicated research and innovation hub will include laboratory space, housing new, world-leading analytical, field-monitoring and computing facilities, plus training and collaboration space. It has been designed to promote interaction between SWW, our supply chain and researchers from a range of academic disciplines at the University of Exeter.

We are also building a pipeline of research projects that will form the overall research programme. This activity will continue over the 25-year partnership between the University and SWW, supported by £20 million funding from SWW. Employing innovation methods such as design sprints and other collaborative initiatives, researchers and colleagues have been busy pinpointing areas of interest for further investigation.

Investment and Facilities:

- SWW has committed £21m over five years (2021-2026) to the CREWW joint venture.
- £5.9m invested in an 800m² lab facility with advanced equipment, with further investments planned to maintain leadership in the field.

Key Research Projects:

1. **Microplastic Lab:**
   - £1.3m invested in a dedicated lab for microplastics research.
   - Focus areas: analytical techniques, mapping microplastics in wastewater, characterizing microplastics in sewage sludge, and toxicity studies.
2. **CSO and SWO Discharge Impacts:**
   - 3.5-year project to analyse chemical and microbial compositions of storm overflows and surface water outfalls.
   - Aims to understand toxicity and ecological impact, with additional sampling for future studies on microplastics and emerging contaminants.
3. **Groundwater Infiltration Risk Mapping:**
   - Developed a model to map groundwater levels and overlay the sewerage network.
   - Identifies areas at risk of groundwater infiltration and helps target investment.
   - Phase two will develop a methodology for broader application.
4. **Lead Pipe Detection and Plumbosolvency:**
   - Developing a 'Lead Model' to predict lead pipe locations using data science and machine learning.
   - Aims to support SWW's goal of being lead-free by 2050, with the model ready by 2025.
5. **Storying Water:**
   - Uses an arts-led approach to engage audiences emotionally and intellectually with SWW and CREWW's environmental work.
   - Collaboration with Ofwat, including workshops to explore research opportunities.

Q19. Do you believe changes are needed to improve how we monitor and report on the health of the water environment? If so, what changes do you believe could lead to improvements? *(Please select all that apply*

- Reporting on wider outcomes than ecological status (e.g. public health)
- Use of citizen science
- Data sharing platforms for government and third-party evidence/data
- Expanding out from the water body level to report on a whole catchment
- Full or partial integration with wider environmental/water monitoring

Enhanced monitoring can enable timely and targeted actions by providing a comprehensive understanding of water health.

The EA has the authority to conduct thorough assessments and enforce regulations, ensuring accountability among all stakeholders. However, the EA's resources can be stretched, leading to monitoring that is inadequate. Bathing waters, for example, are only assessed in the Summer season, and RNAG updates can be years apart (the most recent update to the RNAGs was August 2023).

The EA has to rely on the efforts of others, with catchment monitoring increasingly done by water companies and other stakeholders.

For example:

- Water companies provide operator self-monitoring (OSM), which involves regular testing and reporting on water quality parameters. Our team of scientists test water across the South West, conducting approximately 2,000 samples daily. This extensive effort ensures that water quality is continuously monitored and maintained.
- In AMP8 water companies are required to install continuous river monitors to provide data on various water quality parameters, such as turbidity, dissolved oxygen, and conductivity, near water company overflows.
- Water companies invest in advanced monitoring technologies, such as AI-powered systems, to enhance real-time data collection and analysis – important to deliver water company operations but also to improve transparency with local communities. For example, in line with Pennon's Board pledge, we are introducing a unique bathing water sampling and analytical regime which goes beyond the testing of the EA - to provide the highest level of water quality information for popular bathing sites.

However, there is only so much that water companies can do, and this risks a fragmented and incomplete approach.

We need to see more frequent and transparent reporting, improved shared catchment-scale data (covering the entire catchment, not just water company assets), and more collaborative monitoring efforts. This should be mandated by government and delivered by regional and local bodies.

This enhanced collaboration would enable early issue detection and swift responses, greater transparency around the sources of pollution, and ensure sustainable and resilient water management practices. By working together and integrating data from various sources, we can create a more comprehensive and accurate picture of water quality, leading to better-informed decisions and more effective interventions.

Use of citizen science

Citizen scientists want to support the scope of water quality monitoring, filling gaps that agencies lack resources to cover. We want to see this form of monitoring increase.

This could be an effective solution, increasing the amount of data available - especially in lesser-studied areas – reducing the financial burden on government agencies. It can also be effective in raising awareness about

water quality issues, and fostering a sense of responsibility, leading to more informed and proactive communities that are better equipped to advocate for and protect their local water resources.

To support this growing area of monitoring, change is needed.

It is essential to ensure data quality. Volunteers can lack formal training and the data they collect might not meet the standards required for scientific research. Citizen science needs to be supported by experts. This means developing standardised protocols and tools for data collection, with appropriate quality control measures, to consistent and validated citizen science data. These steps would pave the way for data to be integrated into wider datasets – providing reliable data.

Pennon is committed to supporting citizen science – we are currently testing quick bacti-tests that can provide results to tests within minutes – providing high quality results. A pilot study is underway, and when complete will allow us to support local activities with the provision of rapid bacteriological tests.

Data sharing platforms for government and third-party evidence/data

These platforms facilitate the integration of diverse datasets, enabling comprehensive analysis and informed decision-making. For example, the Stream platform funded by Ofwat's Innovation fund is an open data sharing platform for the UK water sector. It allows for the free access, use, and sharing of water data, enhancing transparency and enabling comprehensive analysis by integrating diverse datasets. It enables better policy decisions.

By providing a centralised location for data access, these platforms can streamline the process of data retrieval and sharing. This is increasing efficiency and transparency, making it easier for stakeholders to access and use the data.

SWW's WaterFit Live platform, which shares storm overflow data in near real-time, is an example of how data sharing can enhance public trust. In customer testing 96% said that WaterFit Live is easy and clear to use and 76% consider the site important to view before visiting their local beach. Similarly, the Catchment Data Explorer by the EA provides detailed information about the water environment across entire catchments in England, summarising all contributing factors within a catchment.

An overall strategy for data sharing, including citizen science is needed.

Expanding out from the water body level to report on a whole catchment

Monitoring entire catchments provides a comprehensive view of water quality by considering all contributing factors, such as land use, pollution sources, and hydrological processes. This holistic approach can identify the root causes of water quality issues and develop effective management strategies. Data on an entire catchment can help stakeholders make better-informed decisions about resource allocation and environmental interventions.

Catchment-level reporting encourages collaboration among various stakeholders, ensuring all perspectives are considered and promoting coordinated efforts to protect and improve water quality across the entire catchment.

For example, St. Agnes in Cornwall has faced several water quality issues, with two high-profile events at Trevaunance Cove where brown, muddy water was discharged onto the beach following heavy rainfall. SWW was blamed for this, despite no evidence to support that. Subsequent investigations by the EA, funded by SWW, revealed that much of the turbidity originated upstream from agricultural runoff. Monitors installed upstream and downstream of storm overflows collected data on conductivity, turbidity, dissolved oxygen, and ammonium, demonstrating that issues were not solely due to overflows. Despite these findings, SWW continues to face reputational impacts from the two events.

This demonstrates the need to have data in advance, rather than collecting it afterwards, to allow for early detection of potential water quality issues and ensure timely interventions to prevent problems from escalating, ensuring the safety and health of the water environment.

One example of the samples, collected by the EA in February 2023, is shown below and demonstrates that there are issues with water quality separate from our overflows.

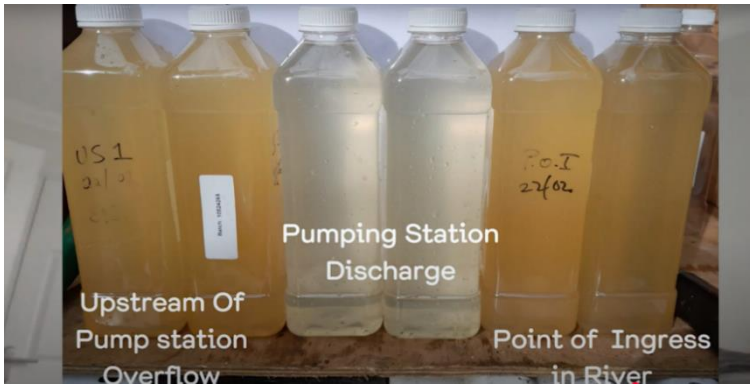


Figure 5. Water quality samples collected by the EA.

Full or partial integration with wider environmental/water monitoring

Integrating water monitoring with other environmental monitoring systems allows for the collection of a broader range of data, providing a more complete picture of the environmental factors affecting water quality.

For example, SES Water's pioneering roll out of AI-powered Aquasuite® intelligent technology across the entire water distribution network has enabled real-time data collection and analysis, enhancing the accuracy and responsiveness of environmental management. The self-learning network identifies issues in near real-time so action can be taken more quickly – helping to ensure customers continue to receive an uninterrupted supply of water and reducing leakage.

Currently, there is a lack of advanced technologies and effective integration of data from different monitoring systems. However, this comprehensive approach is very effective in understanding the interconnectedness of different environmental elements and their cumulative impact on water resources. The regulatory framework should encourage and support such innovations.

Q20. What role do you believe the government can play in providing strategic direction for the water industry?

The government has a greater role to play than ever before in setting a clear, stable, and long-term strategic direction for the water industry — particularly given the scale of investment, cross-sector dependencies, and rising public expectations.

Our water infrastructure is critical for the UK's long-term economic growth and security. Strategic direction must be coordinated nationally, with government setting overarching strategies and priorities that guide regulators and companies alike. That includes setting the affordability envelope and the pace of investment. These trade-offs—between resilience, service levels, and what customers can afford—require cross-party legitimacy and cannot be resolved by regulators or companies alone.

However, there is currently misalignment between regulators' roles and expectations. For example, Ofwat has a sustainable development duty and is required to act in accordance with the Strategic Policy Statement (SPS), which includes environmental priorities. The EA has environmental duties, but too often is constrained by delivery dates and is unable to consider wider things such as cost benefit analyses and wider public benefits (such as food security or public sufficiency of supply during periods of drought) leading to different interpretations of what outcomes are affordable, desirable, or achievable. This lack of coherence creates inefficiencies and delivery risk.

At the same time, strategic direction must preserve the independence of regulators. Overly detailed instructions in the SPS can reduce Ofwat's ability to carry out independent economic regulation, particularly in areas like price control determinations. Government should focus on setting long-term, outcome-based priorities, rather than scheme-level direction.

From our experience in PR24, the framework has enabled us to plan around resilience and environmental goals—but gaps remain. For instance, bioresources lacks the same clarity of targets as other areas. These inconsistencies limit confidence and delivery capability across the sector.

Government targets should be coherent with wider national objectives, including Economic Growth. For example, it is important to consider whether certain targets may act as a disincentive economic growth. The target to reduce business water demand, as an example, could prevent growth in water-intensive industries, even in regions where there is sufficient water.

A clear strategic direction from government is also essential to ensure the water industry remains investable. This includes providing fair and stable regulation to support long-term returns and deliver major infrastructure upgrades. A system once revered needs to regain credibility—and credibility starts with a government-led, outcomes-driven, and joined-up strategy.

Finally, the government has a vital role in better coordination across sectors and regions—ensuring that national goals are delivered through regional partnerships and local action. National frameworks should embed environmental outcomes more fully in water supply planning, while enabling catchment-scale collaboration on wastewater, where problems and solutions are inherently local.

In short, government should set the outcomes, priorities, and pace—while empowering delivery bodies with the tools, flexibility, and regulatory coherence to make it happen. A system once revered for its clarity and credibility must now evolve to meet the scale of today's water challenges.

Q21: What changes, if any, should be made to how the government provides strategic direction for the water industry?

- Changes are needed

We believe changes are needed to how the Government provides strategic direction for the water industry. There is currently no coherent framework for managing the critical trade-offs between affordability, environmental ambition, economic growth, and resilience. Instead, duties are fragmented across regulators, with inconsistent alignment between objectives, powers, and delivery.

Government should clearly define the national strategic objectives for the sector — setting the overall affordability envelope, investment pace, and priorities for regulators. This includes making explicit how trade-offs should be managed between competing demands such as water supply security, environmental quality, flood risk, housing growth, and decarbonisation.

In this model, Ofwat should be empowered as the lead regulator, with responsibility for coordinating across regulatory bodies, including the Environment Agency (EA) and the Drinking Water Inspectorate (DWI). Ofwat's sustainable development duty and its role under the Strategic Policy Statement (SPS) already position it well for this role, but effectiveness is limited by misalignment across regulatory remits. The EA has a clear environmental focus but insufficient duty to consider economic trade-offs or affordability, creating a mismatch between ambition and practical delivery.

The SPS should focus on three core priorities for Ofwat and the wider regulatory system:

- Security of Supply: Ensuring reliable, resilient water and wastewater services in the face of climate risks, growth, and emerging threats such as cyber-attacks.

- Affordability: Delivering services efficiently for all households, with support targeted to those who need it most.
- Market Development: Supporting the evolution of water markets, including integration with sectors such as energy and agriculture.

The SPS must strike the right balance between clear strategic steer and regulatory independence. Too much prescription risks undermining regulators' autonomy, but too little clarity leaves key trade-offs unresolved and weakens accountability. Direction should focus on the outcomes government expects, not the methods regulators use to achieve them.

There are also blind spots in current government strategy. Areas such as bioresources regulation lack clear policy frameworks, while housing and infrastructure planning decisions often fail to align with water system capacity. In our region, for example, 50% of applications for first-time sewerage are rejected, highlighting poor coordination between planning and water infrastructure (see Case Study 8).

We support the conclusions of the Corry Review, which recommends consolidating Defra's regulatory duties around a core set of priorities — including security of supply, affordability, and market development. We also recommend applying a shared 'value for money' principle across regulators to ensure environmental ambition aligns with economic realism.

Our water infrastructure is nationally critical. Government leadership must set clear priorities and the affordability envelope, while empowering regulators to deliver. Reform should create the conditions for better coordination, investment, and innovation — ensuring outcomes are achieved in ways that are affordable, resilient, and responsive to long-term national needs.

Q22. Do you believe there are barriers to effective long-term water industry planning? If so, what factors do you believe are preventing effective long-term water industry planning?

- Limited clear guidance from UK and Welsh Governments on priorities and how to manage trade-offs.
- Regulators are not adequately supporting effective planning (e.g. through guidance, scrutiny)
- Unclear what duties and functions other stakeholders (e.g. local authorities) are expected to deliver to contribute to plans.
- Regulatory requirements don't support sufficient long-term certainty or respond well to emerging issues/policy changes
- Plans don't interact well together (e.g. duplication, decisions/timelines/asks conflict, and/or decisions aren't sequenced in the right order across plans).

Q23: What changes, if any, would help water companies to use planning frameworks more effectively to fulfil their duties and deliver their functions?

Water companies need stronger powers and a more streamlined planning framework to meet long-term duties efficiently. National Grid offers a useful model—its statutory powers include permitted development, and protected infrastructure corridors. Equivalent tools could accelerate strategic schemes like reservoirs and regional transfers, which currently face delays due to land access and planning constraints.

Water companies face strict liabilities, so they are held responsible for harm regardless of negligence. This is designed to ensure problems are addressed promptly, but it means water companies are responsible for issues outside of our control. For example, each year we face c.230 third-party strikes to our water networks.

Water companies should have statutory consultee status in local and regional planning. Presently, developers can legally connect to networks without consent, leaving companies with obligations but few rights. Tackling

illegal connections through prosecution is time-consuming and costly—this imbalance must be addressed. For example, there has been over 300 illegal misconnections to our sewerage network since 2020.

Licence reform could help by embedding clearer duties around resilience and long-term planning, while respecting the existing separation of economic and environmental regulation under the Water Industry Act 1991.

Planning frameworks must be better aligned. WRMPs, DWMPs and WFD targets are interdependent but overseen by different regulators to different timelines and assumptions. We support simplification, with high-level policy steer replacing overly detailed guidance.

Mechanisms for dynamic investment are also essential. The Green Recovery Programme unlocked £82m for SWW to accelerate environmental improvements (see Case Study 15 below). Flexibility should become the norm.

The fast-tracked projects of the Green Recovery show what's possible when regulatory frameworks support ambition. These should be the standard—not the exception.

By reforming powers, simplifying planning, and enabling more responsive investment, government can unlock faster delivery, greater resilience, and long-term value for customers and the environment.

Case Study 15 – Accelerating investment for the betterment of the environment.

The ability to identify and put forward schemes under a mechanism such as Green Recovery has proven to be very beneficial, allowing us to respond to customer views and what matters most by progressing investment, with delayed bill impacts supporting affordability.

Following the UK Government's commitment to build back better following the Covid-19 Pandemic, we were pleased to options to support the green economic recovery. Our Green Recovery Initiative, developed with customers and stakeholders, proposed schemes benefiting our region - delivering significant benefits for customers, society and the environment.

Following detailed assessment by regulators, Ofwat approved £81.6 million of new environmental investment for SWW over the period to 2025, with no impact to customer bills in AMP7.

SWW's Green Recovery Initiative included investment across the whole of the region that supports the creation of c.500 jobs, benefits the wider supply chain and provides opportunities for SWW's existing workforce to gain new skills. Our plan committed to investment to deliver five programmes:

- Knapp Mill water treatment works advancement - Upgrading the existing Knapp Mill Water Treatment Works domestic supply with a new innovative treatment process. This will provide a world class drinking water supply serving Bournemouth Water customers even with deteriorations in water quality in the region.
- Water resource grid enhancement – Roadford Pumped Storage and Transfer Scheme to support increased water resilience in the face of increasing growth and demand.
- Smarter, healthier homes – allowing us to start our smart meter installation programme and lead replacement programmes early, supporting our roll out at scale in AMP8.
- Storm overflows – inland bathing water pilots which has led to four new bathing waters, and additional SOAF investigations to identify the root causes and best solutions to overflow events.
- Catchment management – Delivery of 3,000 ha of catchment improvements including peatland restoration.

Section 3: The Regulators

Q24: How would you rate the performance of the water regulatory framework?

Performing averagely

Q25: To what extent do water regulators coordinate effectively in the regulation of the water industry?

To some extent

Q26: What changes, if any, do you consider are needed to the framework of water regulators to improve the regulation of the water industry? Please consider both potential benefits and costs of any proposed changes.

Economic regulation is a force for good. It has benefited the water sector since privatisation, driving over £236bn in modernising infrastructure, building resilience, facilitating technological advancements and better asset management practices.[20] But the regulatory framework is now too complex, overlapping and inconsistent. Reform is needed to simplify, clarify and better align roles.

We believe Ofwat should remain the lead regulator, coordinating with the Environment Agency (EA) and the Drinking Water Inspectorate (DWI). Ofwat's duties under the Strategic Policy Statement (SPS) position it well for this role, but its effectiveness is limited by misalignment between regulators. For instance, the EA focuses on the environment but lacks the statutory responsibility to address affordability and economic trade-offs, creating a gap between ambition and practical delivery.

We recommend the following changes:

1. Simplified, clearer regulatory roles: The current system has multiple regulators with overlapping and sometimes conflicting duties. For example, pollution incidents are reported differently across regulators, and metrics like per capita consumption vary. A streamlined structure with clear roles would reduce complexity and improve coordination, allowing regulators to focus on their core functions.
2. Government-set affordability envelope and investment pace: As outlined in Q21, the government should set the affordability envelope, determine the pace of investment, and resolve trade-offs between water security, environmental quality, and economic growth. These decisions would provide a clearer framework for regulators to operate within, ensuring consistency across the sector. Without clear guidance, regulators are left to interpret conflicting priorities, which can lead to inconsistent approaches.
3. Proportionate, risk-based oversight: Water regulation should apply a risk-based approach, granting high-performing companies more discretion. This would foster innovation and efficient delivery, while maintaining oversight to ensure national outcomes are met.
4. Better local and regional coordination: While national regulators generally coordinate well, coordination at the local and regional levels often breaks down, particularly within the EA. The National Infrastructure Commission has recommended a regional approach to systems planning, but Ofwat has only applied this in Wales. A more unified approach to regional coordination would help align water resource and flood risk planning across regions.
5. Addressing under-regulated areas: Issues like microplastics and affordability trade-offs are under-regulated. A clearer regulatory framework should address these emerging issues and incorporate them into long-term planning. Additionally, WINEP (Water Industry National Environment Programme) can add complexity, requiring companies to commit to schemes before they are fully scoped, increasing delivery risk.

[20] Water companies deliver record levels of investment, with even more needed in the coming decades | Water UK

6. Focus on asset health and resilience: The current system has shifted from focusing on asset condition to serviceability proxies, which can mask infrastructure degradation. Joint tracking of asset health across regulators would offer a more comprehensive understanding of infrastructure performance, allowing earlier identification of issues and better long-term planning.

There are clear overlaps and underlaps in duties. This in turn means that regulatory reporting does not always give the full picture. For example:

- The EA considers pollution incidents (to water) in its reporting, but this is only 4% of total sewer emissions. In contrast, Ofwat consider pollution to land (internal flooding, external flooding) as well as pollution incidents.
- Ofwat includes non-residential population in its calculations of key metrics such as per capita consumption, whereas the EA does not – this creates significant differences in tourist regions like the South West; and
- Key areas like microplastics and affordability trade-offs are under-regulated.

Water companies are accountable under the Water Industry Act but often are disempowered from interpreting requirements or designing how to deliver them. The system lacks transparency over who decides, how risk is shared, or how trade-offs are made.

The Drinking Water Inspectorate (DWI) provides a constructive model—combining rigour with risk-based oversight and working closely with companies on asset health. In contrast, EA permitting can be overly compliance-driven and inconsistent. Ofwat, too, has become more rigid.

The Water Industry National Environment Programme (WINEP) adds complexity. Companies must commit to schemes before they are fully scoped, increasing delivery risk. Our own analysis shows that across the AMP, reporting spans over 2,000 WINEP lines and 500,000 data cells—diverting resources from outcomes to administration.

Meanwhile, the regime has lost focus on asset condition. Historic methods used engineering condition data and current cost accounting. These were replaced by serviceability proxies, which can mask degradation. Sustained service levels often reflect operational resilience, not long-term sustainability. In wastewater, infrastructure that's now needed was never built—this isn't maintenance failure, but a shift in expectations. Like lead pipe replacement in the 1990s, new investment is required.

Local solutions can offer better value. The Exeter Flood Defence Scheme, for example, aligned national and local priorities into a single, effective plan (see Case Study 16 for more information).

Case Study 16 – Local schemes enabling local collaboration: the Exeter Flood Defence Scheme.

The Exeter Flood Defence Scheme showcases the power of aligning national and local priorities, combined with local collaboration, in addressing environmental challenges.

The Exeter Flood Defence Scheme, managed by the EA with support from Exeter City Council and Devon County Council, aims to reduce flood risk to more than 3,000 homes and businesses in Exeter. The scheme includes new flood walls, flood gates, control structures, and bespoke demountable defences.

The system has delivered a range of water system outcomes. The construction of new flood walls and gates has significantly increased the city's resilience to flooding. The lowering of the Trews flood relief channel and the creation of fish passes have improved the flow capacity of the River Exe, reducing the risk of flooding during high river flows. The creation of new wetland areas and the planting of thousands of trees have enhanced biodiversity and improved the natural landscape. Additionally, the flood resilience of the Countess Wear WWTW in Exeter was protected through wider flood defence work by the EA.

One of the key benefits of this collaborative effort is the pooling of resources and expertise. The EA led the project, while local councils provided crucial support and resources. This partnership ensured that the project was well-funded, efficiently managed, and tailored to the specific needs of the Exeter community.

Overall, the Exeter Flood Defence Scheme demonstrates how co-funding a local catchment collaboration can lead to successful and sustainable environmental solutions. The city is better protected from future flood risks and there is a more resilient and vibrant environment.

Regulation has a key role in driving similar projects. We believe Ofwat should continue to incentivise water company plans that are well founded in data and evidence, and be proportionate where they intervene. Local regulation and scrutiny is the core to this – with Ofwat providing higher level comparisons in order to protect areas with less well developed plans, as well as using competitive market forces to bring new insights.

Q27: To what extent do you think the water industry regulators have the capacity, capabilities and skills required to effectively perform their roles?

The primary issue is not capacity but rather the lack of focus and a unified vision among regulators that needs addressing. The regulatory framework for the water sector has developed in a fragmented manner since privatisation, leading to inconsistent objectives and priorities among different regulators. This fragmentation makes it difficult to achieve cohesive and comprehensive outcomes, and there are limited opportunities for the public to have a say and influence optimal outcomes in their communities.

Achieving the best-targeted investments in improvements requires a holistic evaluation of all impacts. A clear, long-term vision is essential for guiding the water sector towards sustainable and efficient practices. Without a unified vision, efforts to address critical issues such as climate change, population growth, and environmental protection are likely to become disjointed and less effective, with customers and the public continuing to receive incomplete and misleading information – and continuing to see views water companies as the main cause of water quality issues.

Long term plans are essential to set out the long-term direction for all stakeholders can align with. This is key, as water bodies are affected by various sectors, not just water companies – such as agriculture, and highways. Moreover, regulatory objectives for environmental outcomes and nature-based solutions currently can conflict with the rigid WFD deadlines and affordability.

Regulators need to have the flexibility to balance multiple outcomes, such as environmental protection, public health, and economic growth. They need to be able to embrace AI and new models of operating to enhance effectiveness. For example, the EA could leverage satellite technology for monitoring and assessments, reducing the need for in-person site visits. This shift towards technology-driven solutions would enable more efficient and accurate data collection, supporting nature-based and catchment-led solutions.

In summary, while capacity is important, the lack of focus and a unified vision among regulators is a more pressing issue that needs addressing. By establishing a clear, long-term vision and fostering collaboration, the water sector and stakeholders can better navigate its challenges and achieve sustainable, efficient, and equitable outcomes.

Section 4: Economic regulation

Q28. To what extent do you think the economic regulatory framework is delivering positive outcomes?

To some extent

Q29. How do you think the Price Review process should balance the need to keep customer bills low with the need for infrastructure resilience?

The Price Review process needs to strike a careful balance between maintaining affordability and enabling long-term resilience. We believe this balance can best be achieved through greater clarity on national affordability expectations and earlier strategic engagement across Government, regulators, companies, and local stakeholders.

The Government should set the overall affordability envelope within which Ofwat operates. This would provide clearer direction for long-term investment planning. We also support longer price control periods—such as 10, 15, or even 20 years—which would allow companies to better manage delivery risk, smooth investment, and align more closely with the timelines required to build resilient infrastructure.

Societal expectations around performance and resilience are increasing. In past reviews, companies were often asked to meet ever more stretching targets for less money. This incentivised short-term operational fixes rather than longer-term infrastructure renewal, undermining resilience. At PR24, we sought to redress that balance. Our plan was developed based on customer priorities and accepted trade-offs. 92% of our customers supported investment in new and flexible water supplies, and most supported gradual bill increases over time—provided the benefits were clear and those least able to pay were protected.

That's why we welcomed the Government's proposal for a single social tariff, which would ensure support is targeted while enabling investment to proceed.

We acknowledge Ofwat's responsibility to ensure customers do not pay twice for the same outcomes. However, regulatory approaches should also recognise that earlier price controls incentivised and funded short-term solutions. The shift to long-term resilience now requires a different lens—one that does not inadvertently constrain future investment while also recognising that one third of investment is covered by customers compared to two thirds by investors.

We are supportive of national resilience standards—recommended by the National Infrastructure Commission—but these must take account of different starting points. For instance, creating second-source water supplies in a peninsula with limited interconnection is more complex and costly than in regions with existing grid infrastructure. A one-size-fits-all approach risks disadvantaging customers in areas with more challenging geographies.

More broadly, the scale and structure of enhancement programmes vary significantly by company. This has implications for output regulation and the application of tools like PCDs. Standardised national outcomes can make it harder to reflect region-specific investment needs and customer priorities.

We believe the PR24 framework evolved positively during the process. While we made some swaps due to government priorities (e.g. on event duration monitoring), these were not material and reflected a shared direction of travel. Looking ahead, a more structured strategic conversation earlier in the process would be valuable—bringing Government, regulators and companies together to agree on the long-term outcomes, pace, and funding envelope.

Finally, our experience suggests that company-led engagement provided richer insights than centralised tools like "Your Water, Your Say." As highlighted in the Gray Review, tailored engagement remains key to ensuring investment decisions genuinely reflect local customer needs and preferences.

Q30. What, if any, changes could be made to the Price Review process to better enable the water industry to deliver positive outcomes?

Our key recommendation for the price review process centres around the importance of customer engagement alongside customer representation and challenge.

Customer research and the Independent Challenge Group (ICG) WaterShare+ significantly impacted the development and content of the South West Water PR19 Business Plan, driving the pace of investment, the balance of investment, and supporting business plan targets and incentives.

In PR24, customer input into targets and incentives was reduced. There was no requirement for Independent Challenge Group involvement, and overall given the size of the mandated environment programme there was less scope for non-discretionary investment and regional specific targets in our plans. Despite this, we worked intensively with our ICG – the Watershare Panel – and ensured robust customer engagement, as part of ensuring we had a high quality plan that meets the needs of our diverse customer base.

We believe this should be standard practice for all companies to engage with customers, ensure plans meet their needs, and for ICG to have a significant role in the price review process.

Furthermore, we stress that the RAB based economic regulation model continues to work well in many sectors as it historically did do in water–it works well for long-term solutions where there is consensus as to the high-level objectives and the investment required to achieve this. We would urge that this is maintained.

The risk profile for water and wastewater is different and may support different approaches. The RAB/RCV in water is already split into water, wastewater and bioresources, and so the licences and price review can be split further, potentially with different time frames, WACC and reopeners. For instance, there is likely to be more uncertainty on wastewater costs and deliverables. This should see more reopeners on wastewater, but with a longer price review timetable for water where there is greater certainty and national systems planning is developed. The report from Dieter Helm[21] provides a wide range of analysis and evidence in support of this.

The overall regulatory framework is complex, and its simplification alongside the introduction of more market mechanisms, and a strategic steer from Government on the bill/affordability envelope and on catchment and market strategies with companies would be welcome.

Q31. What, if any, changes could be made to the Price Review process on assessing and setting base expenditure to effectively support infrastructure maintenance?

Water and wastewater are local networks, with their own historical drivers for capacity and what quality of service they were expected to support, external pressures, growth pressures and investment needs. There is not a "one size fits all" solution to asset health – older assets, and even those in worse condition, are not necessarily in the short-term delivering worse performance and resilience. Collecting more data may not be the answer for Ofwat's regulation, using backwards looking cost assessment. A set of forward-looking indicators of asset health and resilience has also not been found, despite extensive efforts.

Ofwat have asked companies to stretch base cost efficiencies and the service outcomes from base efficiencies at both PR19 and PR24, but are now collecting more data to look at age and condition based adjustments to the base cost models. Separating base and enhancement company data is unlikely to be informative of future asset health and resilience need, as the best solutions cover both for a local area, particularly for wastewater. Instead, the age and condition of assets provide a minimum underpin to the asset health allowances Ofwat set.

Ofwat should look beyond their historical base cost efficiency models. Prior to PR14, Ofwat used asset age and condition data as a test for allowed maintenance spend, and this could provide a floor for company asset allowances. This also builds investor confidence through the "RCV run-off" element of the building block of

[21] Dieter Helm (April 2025), From the unsustainable to the sustainable: how to reform water and sewerage in England and Wales

revenues, which Ofwat controversially adjusted at PR24 for some companies to postpone customer bill increases to the future. It is Ofwat's adjustment to RCV run-off rates to reduce bills (or companies suggesting they should be adjusted from the asset life to support short-term financeability issues) or resolve financeability that is the issue, rather than RCV run-off being a focus of asset health. Reducing RCV run-off rates increases bills and the total cost to customers over the life of the asset. Reflecting the asset lives in the run-off rate, and not altering the rate from past investments, is consistent regulation and provides an underpin for maintenance funding.

Reflective of the entire regulatory framework, the current approach to infrastructure resilience and delivery has become increasingly complex. Historically, it was simpler. The 2009 Price Review followed a more straightforward methodology, focusing on the essentials of infrastructure resilience without overly complex mechanisms. It emphasized clarity in expectations and alignment of funding with basic infrastructure maintenance needs. At the time this reflected that many of the assets then had recently been enhanced, but the principles still hold. Asset health and condition data was used to set a baseline for maintenance expenditure bespoke for each company, that was consistent with the "RCV run-off" allowance included in revenues This link for investors builds their trust. Companies can make cases based on their asset knowledge with local engagement, including with DWI and EA. It can operate through strategic discussion at the start of the price review process that identifies the issues affecting each catchment and company.

Case Study 17 – RCV run-off as a capital maintenance underpin.

We have set out in response to Question 31 how we believe undertaking asset revaluation using age and condition data can act as an underpin for capital maintenance allowances. This reflects the approach taken up to PR09 when assets had been recently upgraded to ensure price limits included sufficient allowances for maintenance. Companies could make cases (both for base maintenance expenditure and for enhanced service levels such as for sewer flooding or flood resilience needs) for additional expenditure.

The principle is that assets over time do age, but it is not clear in a five year period that older assets perform less well than more recent investment. In the long term, once enhancement investment has been completed, there should be equivalence between the useful asset life and the recovery of the RCV.

We illustrate this in action for Pennon (South West, Bournemouth, Bristol and SES Water combined).

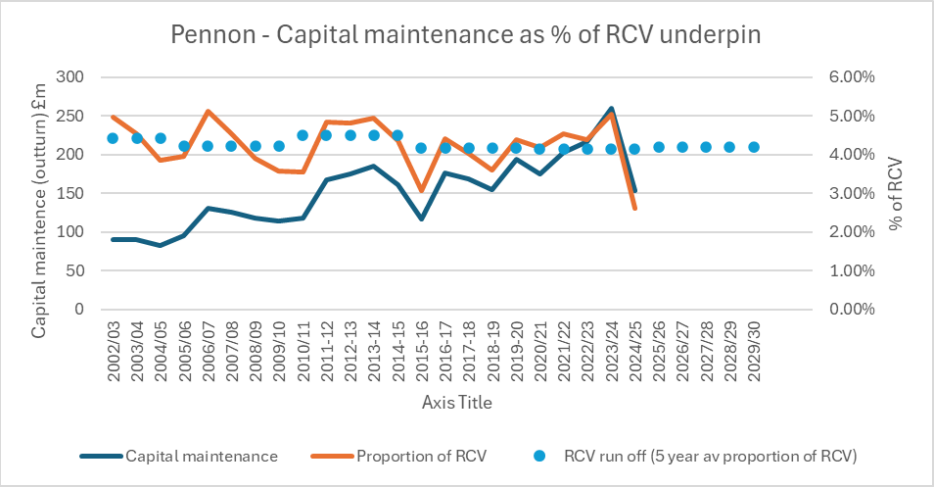


Figure 6. Capital maintenance as % of RCV underpin (Pennon)

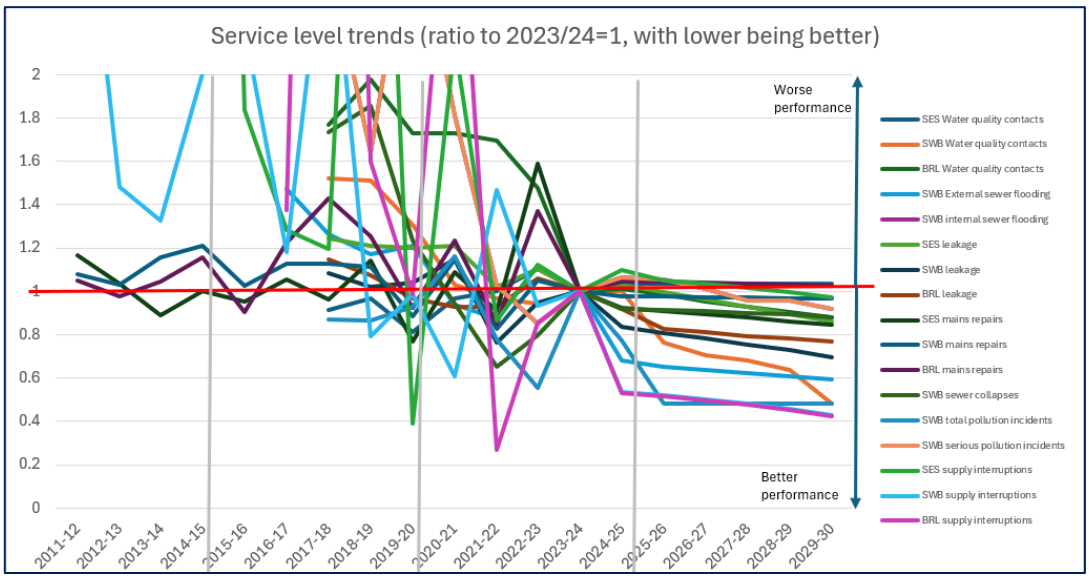
This graph shows capital maintenance increasing over time. Despite this maintenance has been a relatively stable proportion of the RCV (c 4% to 4.5%) as the asset base has growth. This is consistent with Ofwat's PR24 methodology of an upper limit of c4.5% on RCV run off being consistent with asset lives. However, the graph shows a peak in maintenance expenditure in 2023/24, which is investment in water resilience and WaterFit pollution reduction investment in response to emerging concerns and also the pressure of meeting Ofwat's PR19 service level stretches, such as on leakage.

As the RCV is growing significantly during AMP8, we would expect a significant increase in maintenance expenditure for AMP9 to keep capital maintenance as a proportion of the asset base relatively stable. This reflects that there must be maintenance benefits from the additional enhancement investment in the short to medium term. But even if there is an increased enhanced programme at PR29, we would still expect maintenance expenditure to reflect the historical 4.2%-4.5% of the RCV as a minimum – more if there are pressures on the network from climate change which we do not partly mitigate from improved catchment planning.

This relatively stable level of maintenance against the value of the asset base does not reflect the additional pressure from Ofwat assuming stretched service levels (known as "what base buys") from this level of expenditure. This has resulted in the cost and service underperformance in recent years, and this operational underperformance has increased the cost of capital. The evidence Oxera provide in their reports on behalf of Water UK on Investability and on Performance / Supervision provide evidence on this. Where we diverge from this evidence is a solution which suggests increasing the cost of equity to accommodate these incentives – such an aiming up is not supported by customers and is better resolved by rebalancing incentives. This is not the approach Pennon suggested at PR24, and Ofwat made a number of changes for their PR24 Final Determination aligned with our approach. We outline this in our recent third party submission to the CMA for their PR24 redetermination (to be published by the CMA shortly), including Ofwat's recognition that PR29 would likely require a reset with a different approach, rather than rolling the PR24 approach forward. Our proposals to this Call for Evidence are part of that reset.

We illustrate the increase in service levels for asset health measures as a ratio to 2023/24 performance in the graph below, where comparative data is available. The graph is truncated at twice 2023/24 performance for ease of reading. This shows the improvement Ofwat assumed for a range of services, and also the variability in performance that is weather and third party linked that would require far higher capital maintenance and operational expenditure to avoid such risks. As we show in Case study 11, this is uneconomic and goes beyond investment required for resilience. By stretching performance in service levels and with limited protection in the incentives for external risks such as from third parties, cost and investor risk is being baked in. Ofwat mitigated this at PR24 with additional complexity such as the Outturn Adjustment Mechanism, which normalises incentive risk to industry median performance, which a deadband.

As services improve, it becomes harder for companies to balance areas of underperformance with areas of outperformance, particularly if the sector narrative focuses on areas of failure rather than improvements in services, which is the general trend of improvement shown in the graph below for AMP7 and further Ofwat stretch for AMP8.



The maintenance underpin can be broken down to different asset classes and a process to adjust for age and condition data was undertaken by each company to a standard methodology, with Ofwat scrutiny, up to PR09. We collected some of this data in regulatory submissions where Ofwat belatedly requested this at PR24 and have

most of the necessary data within our day-to-day asset management systems. An example from PR09 for wastewater treatment illustrated the future maintenance need on the 2005-2010 cohort of wastewater quality investment by life of asset. This approach can drill down to specific asset cohorts to refine the high level underpin we illustrate above.

Q32. What, if any, changes could be made to the Price Review process on assessing and setting enhancement expenditure to effectively support infrastructure improvements?

At PR24, significant effort from regulators and companies went into the enhancement expenditure investment process. Where there was early clarity on the investment needs, and the affordability and bill impact of this had been tested with customers, there was little issue and the enhancement expenditure need and efficiency could be demonstrated. A positive example of this is SWW's enhancement investment in lead pipe replacement, which also has long-term resilience and sustainability benefits to asset health and public health. Both Ofwat and the DWI supported the ambition we showed, despite there being an option to postpone accelerating this investment beyond 2030.

We therefore suggest that early discussions between Government, regulators and companies on the affordability/bill envelope will help the sector to develop the best available solution, including for enhancement investment. As we note under Q31, the boundary between base and enhancement for the best plans is likely to be blurred in any case. This will build on the LTDS that companies developed as part of PR24.

For the water service, where national planning with the DWI and for water resources is possible, it may be possible to have a longer price review period. For wastewater, where local issues dominate, regional authorities can help ensure that enhancement solutions reflect catchment needs. Whilst Ofwat will inevitably need to use comparative tools to assess enhancement costs, for company plans that meet bill envelopes, are consistent with long term strategies, and have consensus through catchment level scrutiny, there will be less reliance on top-down efficiency models for enhancement. Ofwat have reflected this at PR24 with a lower 40% enhancement sharing rate and more reopeners for investment changes, but with separate licences for water and wastewater companies can go further to get better solutions with a lower risk

We know this solution will work as it has worked for past enhancement. For example, the flood resilience of our largest WWTW at Countess Wear in Exeter was protected through the wider flood defence work by the EA to protect Exeter, rather than just at the works. This type of innovation will never arise from data analysis across companies at a granular level alone. Ofwat should continue to incentivise water company plans that are well founded in data and evidence, and be more proportionate where they intervene. As we highlight elsewhere, local regulation and scrutiny is the core to this. Ofwat may still make higher level comparisons in order to protect areas with less well-developed plans, as well as using competitive market forces to bring new insights.

There should be mechanisms that allow for dynamic adjustment of enhancement plans during the price control period. The Green Recovery Programme and Defra's acceleration plans provide precedent for this more agile approach. A more flexible, proportional route for re-opening enhancement plans would support better value for customers and improve delivery under uncertainty.

See Case Study 18 below for information in relation to investment over each AMP.

Case Study 18 – Investment levels have consistently sat above those pre-privatisation.

The graph below shows that there was an increase in investment from the level immediately prior to privatisation of SWW (and the introduction of Ofwat controls for BRL and SES). This saw a prolonged period of enhancement investment in water infrastructure and mains rehabilitation and new wastewater facilities to meet statutory drivers up until 2009. This was at a stable level in real terms, but less Government focus on new statutory investment saw investment reduce until 2023, as confidence in the lack of investment saw accelerated / Green Recovery investment start. This additional investment as well as increased costs is the main driver of increased bills for AMP8, with a significant uplift in expenditure expected to continue at this new level out to 2050 (this excludes the cost of strategic water resource schemes such as Cheddar 2 which will be c£2bn of additional investment between 2030 and 2045. Note the graph also shows a cycle of lower investment at the start and end of each five-year period. This provides evidence that a longer price control with reopeners would have benefits in terms of investment financing and productivity and efficiency for the supply chain.

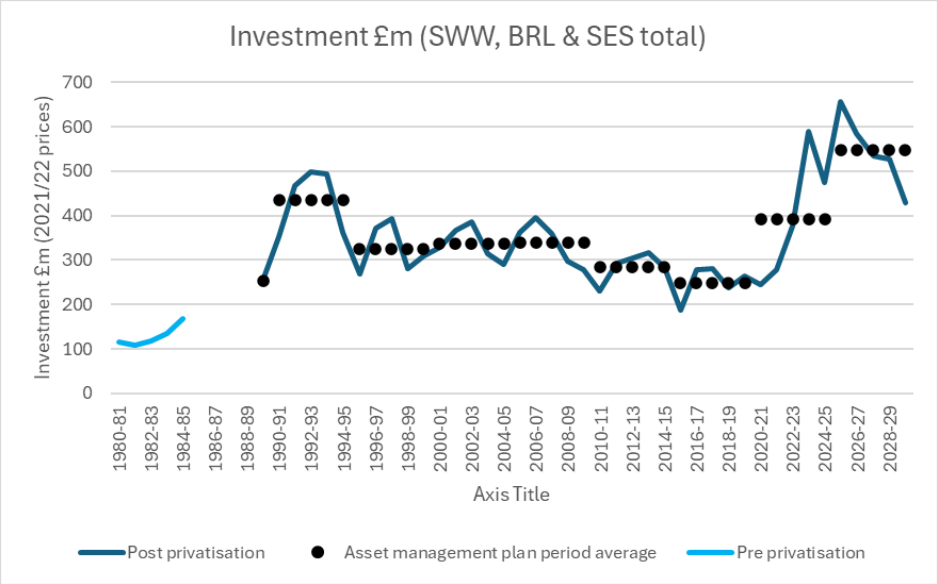


Figure 8. Pre- and post-privatisation investment across Pennon's water businesses.

Q33. What, if any, changes could be made to the Price Review Process on assessing and setting the Weighted Average Cost of Capital (WACC) to effectively attract investment in the water industry?

To attract long-term, low-cost investment into the water sector, the Price Review process must be underpinned by a stable, transparent, and credible approach to setting the WACC. The regulatory framework needs to provide a clear and consistent basis for investment decisions, reducing regulatory risk. When the framework is perceived as unstable or politicised, this increases financing costs which ultimately results in higher bills for customers.

We describe in our answer to Q30 how the RAB model in water can be enhanced by considering water and wastewater separately because of the different risk profiles. This would also be supported by greater cross-sector consistency in how the WACC is set, so the sector regulator is focusing on the risks to that sector rather than investors navigating a separate WACC methodology for each regulated sector.

We support the principle of regulatory independence and believe this could be strengthened through requiring more consistency between regulators on the WACC methodology (something government asked the UK Regulators Network to do in 2021), but it needs more debate, such as open hearings with an independent body (like the CMA expert utility panel). This would support Ofwat in setting the cost of equity in a way that builds credibility, removes political influence, and enables a more stable and predictable investment environment.

Alongside a more independent WACC-setting function, the Price Review process should ensure that the overall regulatory framework presents a genuine opportunity for long-term investment. This includes a more balanced calibration of incentives and returns, including performance commitments and incentive rates, based on realistic assumptions. Greater use of adaptive tools—such as reopeners, gated funding mechanisms, or uncertainty allowances—would also provide necessary flexibility and risk mitigation. These tools could help ensure that price controls reflect changes in inputs and delivery conditions over time, rather than locking in rigid assumptions that quickly become outdated.

Historical performance indicators, such as serviceability, showed stable or improving trends over multiple price control periods, which created the impression that asset health was being maintained. However, this masked a deeper issue: the regulatory focus shifted away from direct assessment of asset condition and current cost accounting. While service outcomes remained strong on the surface, there was insufficient visibility into underlying deterioration. As a result, capital maintenance was not always funded at levels needed to ensure long-term sustainability—particularly in wastewater, where much of the system requires not just maintenance but fundamental redesign to meet today's environmental and resilience expectations.

For more information on work undertaken to improve historical performance, please see Case Study 19 below on Clean Sweep.

Finally, any changes to WACC setting must be aligned with broader sector guidance (e.g., from UKRN) and avoid unnecessary divergence between regulators. At PR24, Ofwat's WACC broadly aligned with our proposals, which is welcome and us good evidence that some cross sector WACC governance would improve this further. Future reforms should build on this consistency to avoid undermining investor confidence.

Case Study 19 – Post privatisation of bathing waters and sewerage network.
SWW's multi-billion project has transformed the region's bathing waters and sewerage network. Our region has experienced transformational periods of investment before. Twenty years ago, many communities lacked the most basic sewage treatment and the region's reputation as a tourist haven was under threat. Between 1992 and 2011, a major multi-billion programme known as 'Clean Sweep' saw wastewater facilities installed for the first time around the coastline and 250 crude sewage outfalls closed through investment in sewage treatment facilities across the region. The final scheme at Polperro in Cornwall was completed in 2011. Overall this major investment has improved water quality across the bathing sites in the South West. The incredible success of the programme was evident in 2006, when for the first time all of the region's then-144 bathing sites across Devon and Cornwall achieved 100% compliance with the EU mandatory standards. Furthermore, in 1991, 28% of bathing waters met Excellent standards compared to 83% excellent in today. After spending £100 million on its inland wastewater programme, SWW has further helped clean up the region's rivers and ensuring they remain healthy ecosystems to support strong fish stocks and other wildlife. 12% of RNAGS relate to water company operations.

Q34. What, if any, changes could be made to the Price Review process on assessing and setting performance incentives to effectively secure infrastructure delivery?

Since 2014, the introduction of outcome-based regulation and financial incentives has been a welcome evolution in the sector. It has promoted transparency, accountability, and encouraged companies to continuously improve performance for customers, the environment, and public health.

However, the balance of incentives and obligations has shifted significantly at PR24. With the introduction of PCDs, Ofwat has moved back towards a more output-based model. These now cover around 90% of all capital investment and require companies to deliver specified outputs and report progress on a six-monthly basis. While intended to provide clarity, the rigidity of this model risks undermining delivery and innovation—particularly

where programmes need to respond to dynamic conditions such as weather, supply chain constraints, or updated environmental permits (see Case study 10 for more information).

There is also a growing risk of 'double jeopardy' where companies are held to account twice for the same issue. For example, asset health metrics, such as mains replacement, are subject both to PCD time-based outputs and Outcome Delivery Incentives (ODIs) for delivery outcomes. This layering creates conflicting incentives and adds unnecessary complexity. It is worse on wastewater, where PCDs for multiple different types of storm overflows is overlaid with a complicated ODI which mixes both spill measurement and monitor availability. With separate asset health penalties for two different categories of pollution incidents, and given the uncertainty with climate change on rainfall in the future, if rain falls in a different place and intensity from the existing network design, then internal and external flooding also increases with additional sets of ODI penalties. Ofwat and the EA can also take forward enforcement and a number of different forms of monetary penalties and prosecutions.

We are also concerned that many PR24 metrics do not reflect regional circumstances or local customer priorities. At PR14 and PR19, outcomes were company-led, informed by robust research and engagement. At PR24, Ofwat sought to standardise outcomes, but ultimately moved away from that standardisation at final determination. In our case, we sought to continue funding for a locally supported initiative aligned with catchment priorities and a linked incentive, but this was rejected as not being within Ofwat's standardised framework. This undermines the principle of customer legitimacy and results in companies being incentivised to invest in things customers may not value.

We believe future Price Reviews should return to a company-led, outcome-focused approach—backed by transparent assurance and rigorous customer engagement. A smaller, more targeted set of PCDs should be retained, with greater flexibility in their delivery and recognition of interdependencies across programmes. Gated funding and adaptive planning mechanisms—already used successfully in areas like the Green Recovery programme—could support more responsive investment.

More fundamentally, incentives must be better calibrated. The current framework sometimes delivers penalties and rewards that are disproportionate to the actual impact on customers or the environment. This can distort investment decisions and reduce overall value for money.

A future framework should aim to simplify incentives, focus them on the outcomes that matter most to customers and the environment, and provide the flexibility needed to adapt delivery plans over time. One example key to growth is our plan for two regional bioresources facilities – government policy towards co-digestion of waste and the ability to accelerate investment that supports growth- in the regulatory framework would enable this,

This would help secure infrastructure delivery in a way that is investable, locally legitimate, and resilient to change—delivering better value and outcomes over the long term.

Q35. **To what extent does the economic regulatory framework deliver acceptable water bills for customers?**

- To some extent

Q36. **What, if any, changes would help ensure customers are paying fairly for the water they use?**

- Improve transparency for customers on how money from bills is used
- Increase the use of smart water meters
- Explore innovative water charging (such as rising block tariffs or other innovative tariffs) to support affordability and/or efficient use of water.
- Other – Customer choice

In a market in which customers cannot choose their provider, providing customers with choice is fundamental. Choice can be presented in several ways, for example in metering, or in the tariffs they are on, or uniquely to

Pennon, in how they share in our outperformance – whether through money off the bill or becoming a shareholder through WaterShare+ (see Case Study 20 below).

Rolling out progressive tariffs through a national framework, with local implementation (working in conjunction with stakeholder groups, e.g. local MPs) should be a priority alongside the launch of a national social tariff. Ofwat and CCW have been supportive of tariff innovation trials, currently being undertaken by SWW (though this has taken over 2 years in the design and modelling processes, following significant customer and stakeholder engagement). Early results indicate that high users on a rising block tariff have reduced average daily use by nearly 10% or the equivalent of 45 litres.

We support the role of a consumer champion ombudsman, with legal powers to resolve disputes. This would bring the water sector into line with other sectors. Customers should have the ability to take complaints directly for adjudication and enforcement, once company complaint processes have been exhausted.

It's not however only those that "pay" who should be defined as customers. There is a need to relook more broadly at "consumers." For example, in regions such as the South West, where tourism can drive a threefold increase in users, there are also multiple parties that abstract and pollute. Currently this means that water billpayers are disproportionality picking up the costs from others–whether from farmers, businesses, builders, local authorities and Highways. The latter has 18,000 road overflows into streams and rivers, unpermitted, unmonitored and unfunded. This could be addressed from the introduction of a "use of system" as exists in other utilities, or ensuring "polluters should pay" at source.

Case Study 20 – A unique relationship with our customers: WaterShare+.

WaterShare+

Pennon is focused on operating a socially responsible business which delivers for customers. It has long recognised that the water sector is of significant and growing importance to customers – given its impact on household finances, communities and local environment. Customers need to have the ability to provide their views and be heard at the most senior levels and be able to participate in the sector.

Each and every day we focus on operating a socially responsible business that can deliver for colleagues, customers, and the environment. For that reason, we developed the WaterShare+ scheme, in line with our Board Pledge to empower customers. This is unique to SWW and puts customers at the heart of what we do.

WaterShare+ has changed our relationship with customers.

WaterShare+ consists of the following:

- A Customer Panel - A WaterShare+ Customer Advisory Panel that works on behalf of customers scrutinising and challenging performance and plans.
- Public Engagement – with everyone invited to WaterShare+ meetings which give customers regular opportunities to get involved, speak to the executive team, keep the company accountable and shape plans for the future by prioritising where to invest and improve.
- A Financial Stake – customers can take a financial stake in the business too, through Pennon's share scheme. 1 in 14 customers now shareholders, including 1 in 30 customers in the Bristol region, thanks to the WaterShare+ scheme.

WaterShare+ provides a meaningful route to engage directly with our customers, through our quarterly public meetings and at our customer AGM, so we can hear directly what matters most and reflect what we have heard in what we do. Everyone is invited to our WaterShare+ meetings – which are always attended by our CEO and the Executive team. These give customers regular opportunities to get involved, speak directly to our Executive team on any topic they wish, and keep us accountable.

For example, during the cost-of-living crisis, we have heard that this has weighed heavily on some customers, so we have ensured annual bill levels increases well below inflation levels and the 7% annual increases seen across the sector, whilst doubling the number of customers on support tariffs, and taking steps to eradicate water poverty.

The scheme gives customers the option of a financial stake in our business, through our share scheme, as we look to share success. Customers can either opt to take shares in our parent company, Pennon Group, as opposed to money off their bill.

Since we started the WaterShare+ scheme in 2020, approximately 90,000 customers have become part owners of our parent company.

With 1 in 10 households in the South West are target level of shareholders by 2030, we are well on our path to shifting the dial – and ensuring that more and more customers have a stake and a say in their water company.

For us, the scheme is a fundamental shift of the dial to a socially responsible business. And now, more than ever, it is essential when we need to rebuild trust, and for our customers and communities to feel listened to.

WaterShare+ Customer Advisory Panel

An important part of WaterShare+ is its Advisory Panel. The Panel works with customers across the region to ensure customers' voices are represented within the business.

The independent Panel has improved the transparency of our performance, how we are held to account, and strengthened the two-way engagement with our customers – making sure that customers have a say in the business, and are more in control than ever.

We believe this has been a major step to greater transparency and openness with our customers and stakeholders, a fundamental requirement for all providers of essential public services.

Set up in 2020 with a role of holding us to account on performance on an ongoing basis, the Panel's remit has included oversight of the PR24 business plan. Consistent with our ambition to ensure that we have a rich and comprehensive understanding of what matters most, for PR24 we extended the role of our WaterShare+ Customer Advisory Panel to challenge our approach to customer engagement and to ensure that the plan reflects the outcome of that engagement.

[Source: Further information can be found in our PR24 Business Plan]

Q37. **To what extent does the regulatory framework protect customers from poor service?**

To some extent

Q38. To what extent does the regulatory framework ensure that vulnerable customers are effectively supported?

To a great extent

Q39. **What, if any, changes to the regulatory framework would better incentivise water companies to deliver and maintain high customer standards?** *(Please select all that apply)*

- Greater accountability for water companies' handling of complaints.
- Other – greater competition

A significant change that could positively impact outcomes for vulnerable customers is to advance more quickly towards principles-based regulation, taking inspiration from the approach adopted by the Financial Conduct Authority and Ofgem. Current approaches are towards the prescriptive. For example, Ofwat has recently set out very detailed requirements under the customer licence condition. This type of highly-prescribed regulation is incompatible with principles-based regulation

We also believe that competition in the household market should be introduced, learning from the NHH model where customer choice has driven up customer satisfaction levels comparative to best in class Trustpilot scores. According to the Institute of Customer Service's most recent UK Satisfaction Index 2025, providing an independent, objective perspective across 13 sectors, customers with the highest level of satisfaction tend to be

prepared to pay more. With record levels of investment, this could also lead to improved customer outcomes across the sector.

Thirdly, given water companies are operating national critical infrastructure, expert complaint handling is critical, putting things right and quickly when things go wrong, as occasionally they will. Defra's new GSS payments are welcomed, and we would recommend Government go further and faster with the introduction of a Water Ombudsman, giving customers the confidence that they would have the same levels of protection as exists in energy, communications and rail. Those blueprints exist today. CCW is well positioned to evolve into taking on this leadership role.

Finally, noting the consultations own assessment that Ofwat's own C-MeX ODI does not appear to have driven improvements in customer satisfaction, with industry averages declining since they were introduced, we should move to a specific trust metric that is universally recognised by customers. NHH water companies use Trust Pilot – and this has been key in driving improved customer outcomes, with actionable insight generated from in real time customer reviews. This could be both a symbolic and simple move and one that could be easily adopted.

Q40. What, if any, changes to the regulatory framework would improve support for customers in vulnerable circumstances?

- Introduce a single social tariff for England and Wales.
- Ensure a proactive approach by water companies in identifying customers eligible for additional support

Q41. To what extent is change required to the economic regulatory framework to support water companies' financial resilience?

To some extent

Q42. Which of the following changes to the economic regulatory framework, if any, would improve outcomes for the water industry?

The current RCV-based model remains robust and widely respected — both for domestic project finance, as with the Thames Tideway Tunnel, and in overseas contexts. The focus should therefore be on improving the balance of risk and return to give investors confidence in the regulatory regime. Pennon has consistently delivered customer value within this framework, sharing outperformance through the WaterShare+ mechanism (for more information on our unique WaterShare+ mechanism, see Case Study 20). Financial resilience should be assessed at a sector-wide level as part of the Price Review process, rather than through intrusive supervision of individual companies. A well-functioning market for corporate control could provide a natural corrective: new investors can step in where companies underperform persistently. Maintaining an active, contestable market is essential to enable renewal and fresh capital in the sector.

Restoring investor confidence in both the regulatory framework and wider governance arrangements is critical. Negative political and regulatory sentiment has contributed to declining investor interest (see Case Study 21 below), raising the cost of both debt and equity. Historically, UK regulators were recognised globally for providing high stability and predictability — with the water sector ranked AAA. However, Moody's downgraded Ofwat to AA at PR19, and again to A at PR24 in November 2024. This now places the sector below other UK regulated industries and many international comparators.

Regulatory complexity has compounded the challenge. We believe increasing complexity has contributed to reduced investor confidence. But this does not imply that Ofwat's comparative incentive regime should be abandoned — far from it. Comparative regulation remains a powerful tool. However, the current overlap between incentives and enforcement mechanisms should be addressed. Greater flexibility is needed for company-specific incentives where customer support is demonstrated and delivery is broadly efficient. At PR24, many elements of cost, service and revenue for Pennon and other companies remained close to the original plans after extensive challenge, suggesting that Ofwat's approach was overly rigid in some areas.

We also believe that many aspects of wastewater regulation are inherently local. Local oversight by the EA—aligned through regional authorities—can provide robust governance at this level. Companies should be incentivised to develop trusted, consensus-driven plans, which in turn should raise the threshold for regulatory intervention. This would enable a simpler economic regime, focused on outcomes and supported by local legitimacy.

However, if economic regulation becomes more bespoke and supervisory, there is a risk of dampening the role of the capital market in driving performance. The strength of the existing model lies in its ability to attract long-term investment and allow the market to support underperforming companies through ownership change. Mergers such as those involving Bristol and SES demonstrate how new ownership —alongside measures like separating water and wastewater licences, as recommended by Dieter Helm —can unlock better outcomes.

A stable, proportionate and investor-confident regime remains the foundation for affordable long-term investment and resilient service delivery.

Case Study 21 – The declining sentiment of UK Water investors.

Pennon investors

14,449 Total number of shareholders as of 31 March 2024 composed of:

- 13,744 Individuals
- 617 companies and 5 trust companies
- 83 bank and nominees
- 78,570 WaterShare customer shareholders
- Of the total issued shares c.50% is held by UK institutional investors, pension funds, investment trusts, charities and individuals

Geographical split: c.50% UK, c.25% North America, c.18% Continental Europe, and c.7% Far East and Australia.

Investor sentiment

In any five-year delivery period, two-thirds of funding for the industry's investments comes from investors, with the remaining third sourced from customer revenues. As a result, it is important that investors have confidence in the framework and industry.

With the complexity of the regulatory framework continuing to increase the sentiment of investors towards the industry has steadily declined. Investors have said that the attractiveness of the sector is reducing, with returns better and less risky in Europe, and previous surveys completed by the Global Infrastructure Investor Association have highlighted that "confidence in the water sector has deteriorated significantly and is … probably at an all-time low."

Results from the Barclays Annual Investor Survey (November 2024) showed a still growing majority of investors saw the regulatory framework as unhelpful, hampering investment appetite.

With the sector needing to raise approximately £5bn in fresh equity and £30bn in debt between 2025 and 2030 we need to ensure ongoing investor confidence to deliver for customers – this can be achieved by having a framework that is simple and low risk.

Impact on Share Prices

The graph below shows the impact of our share price as a result of regulatory decisions and milestones, significant incidents and performance. The significant impact of incidents outside of our control, such as at Carland Cross (detailed further in Case study 11), can be clearly seen.

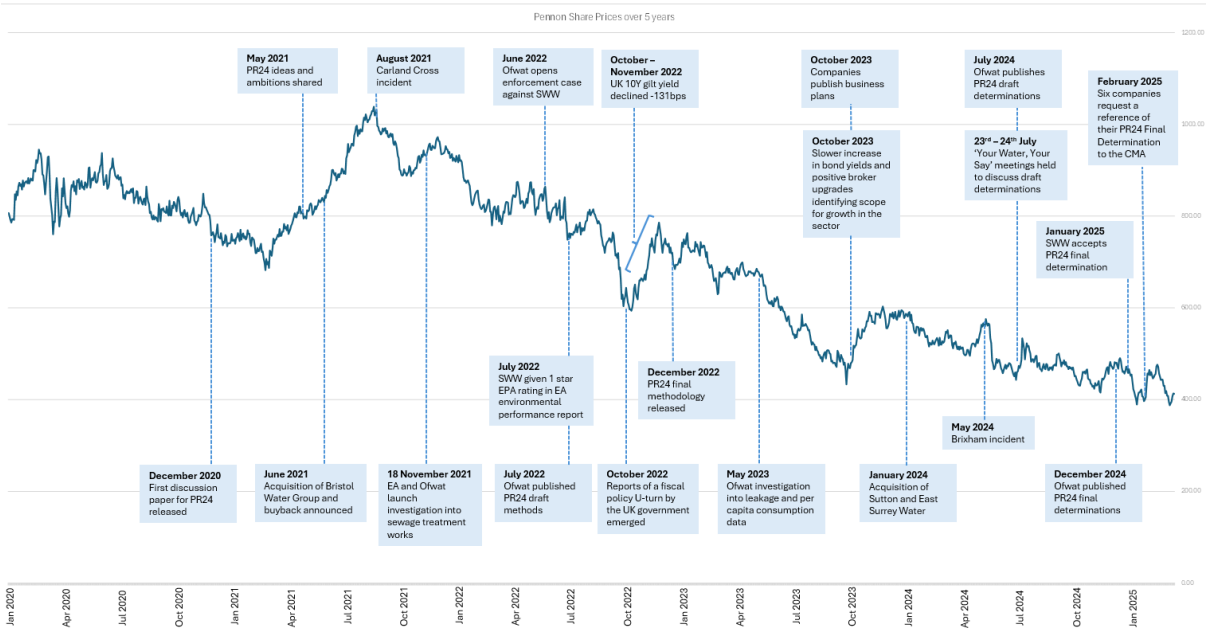


Figure 9. The impact on Pennon's Share Price over a period of five-years.

Q43. Do you think there is evidence on the historical relationship between debt, dividends, and expenditure at water companies that the commission should be looking at?

We do not believe this is an issue for listed companies such as Pennon. We have sufficient financial flexibility to respond to cost changes, supported by access to a range of funding options and forward planning. As costs evolve or where government or regulators accelerate expenditure, we can respond dynamically through the regulated business.

If the regulatory regime is well calibrated—rewarding cost and service performance and allowing returns to flow through dividends—equity remains attractively priced, risk is contained, and the cost of capital is kept low. This ensures investment can flow when needed. Importantly, customers only pay for a third of new investment during the five-year period.

Looking ahead, we expect diverging risk profiles for water and wastewater. We believe this should be reflected in future regulatory and governance reform, including licence structures aligned to the existing RCV split.

Listed models have generally delivered stronger long-term performance. We benefit from more flexible and diverse financing, better financial resilience—as shown by Ofwat's supervisory assessments—and greater transparency, including regular reporting under listing rules. We have also typically been in the top quartile for efficiency in Ofwat's price reviews and have reinvested outperformance for customer benefit.

For example, mergers have delivered operational benefits: Bristol Water has improved in Ofwat's rankings from PR19 to PR24, and both Bristol and SES have realised efficiency gains. Each has its own strengths. SWW's past three business plans received Ofwat's top rating; other listed companies have achieved this once or twice. Our WaterShare+ framework further supports reinvestment and transparency, with CCW and the EA involved in local delivery planning.

We invest to deliver agreed plans—and beyond. Listed status, combined with a stable economic framework, allows us to go further where plans are well supported by stakeholders and customers. Outperformance provides a buffer for further investment in emerging priorities without short-term bill increases outside of the price control.

Historically, there has been a virtuous circle: efficient delivery and financing supported outperformance, which enabled reinvestment and maintained low customer bills. While this wasn't true across the board, Ofwat has noted that companies with high levels of financial engineering also tended to show persistent service underperformance.

PR19 disrupted this dynamic. Incentive calibration led to widespread underperformance across the sector—on cost, outcomes, and financing—alongside increased enforcement action. Ofwat recognised this at the tail end of PR24 and made company-specific adjustments to protect customers. In some cases, commentators have suggested a "doom loop" of underperformance may emerge.

However, this is not the case for listed companies like Pennon. The financial and operational resilience of our model, supported by transparency, strong delivery, and the ability to share benefits with customers, positions us to avoid this cycle.

Q44.To what extent does the economic regulatory framework support or hinder investment into the sector?

Somewhat supports investment

Q45. How do financial returns in the water sector compare to other similar sectors (for example, energy)?

The cost of capital for the water sector has historically been lower than in the energy sector because of a perception of lower risk due to less likelihood of competition. Investor perceptions of the quality of water regulation has fallen recently. Ofwat have had to "aim up" to the top end of their possible range for the cost of equity at PR24 as a result.

However, this only reflects the notional returns assumed in price setting. More important is the actual returns, which is harder to compare because the different regulated sectors form part of the same value chain. The best measure is the "return on regulated equity." In recent years, water companies have underperformed due to overspends on cost, underperformance on outcomes and lower financing outperformance, due to rises in interest rates.

We expect the water sector financial returns to continue to underperform other sectors. For instance, equity analysts expect 8-11% nominal returns are possible for National Grid, which is the main listed company comparator. We are targeting delivery of a 7% real return on regulated equity in 2025-2030 (c.9.5% nominal), a c.1.5% outperformance on the level of Ofwat allowed, which then provides a financial flexibility to undertake further investment, and a stable real dividend yield of c.4% in the FD.

This will be challenging to deliver, and even if we do, it will be lower than the c.8-12% achieved in previous price reviews. A c.7% nominal allowed return (before our targeted outperformance) also provides very little to attract investors compared to a nominal cost of raising new debt of c.6%, given debt investors do not carry the performance risk to these returns. The restrictions on dividends that Ofwat originally proposed at PR24, but have temporarily withdrawn for further consultation, do not exist in the energy sector or other regulated sectors in the UK and abroad.

Another illustration is that dividends in the water sector have been declining, despite higher inflation and interest rates. RoRE returns 2020-2024 average 2.8% in real terms compared to the 4.1% Ofwat assumed at PR19, and dividend yields of 3.5%.

Financial returns in the water sector tend to be more stable but generally lower compared to the energy sector. There is higher volatility in the energy sector, particularly for renewable energy, but they also have higher returns. UK power is deemed the most preferred utility, whilst UK water is currently seen as the riskiest European regulated utility.

It is felt that in the water industry there is limited equity investment available. Other sectors are more attractive investment opportunities as they have better returns, although we believe we continue to outperform the sector as a whole with our model, as shown with our recent equity raise. However, better returns in the water sector is not necessarily due to the WACC itself but due to the incentive and cost risk, including base maintenance allowances not increasing as assets age, and the overlapping enforcement and outcome incentives companies face (see Case Study 22 below for more information on the evidence of returns compared with other sectors).

Case Study 22 – Greater returns in other sectors: the declining attractiveness of water.

It is difficult to compare water sector returns to other sectors as there are few pure play listed comparators in other sectors.

One comparison can be seen is the comparison of the spread between the water sector allowed cost of equity with the returns available on corporate bonds. You would expect a wider spread as regulatory incentive risks have increased. However the spread has narrowed considerably, without an equivalent narrowing of the incentive risk[22].

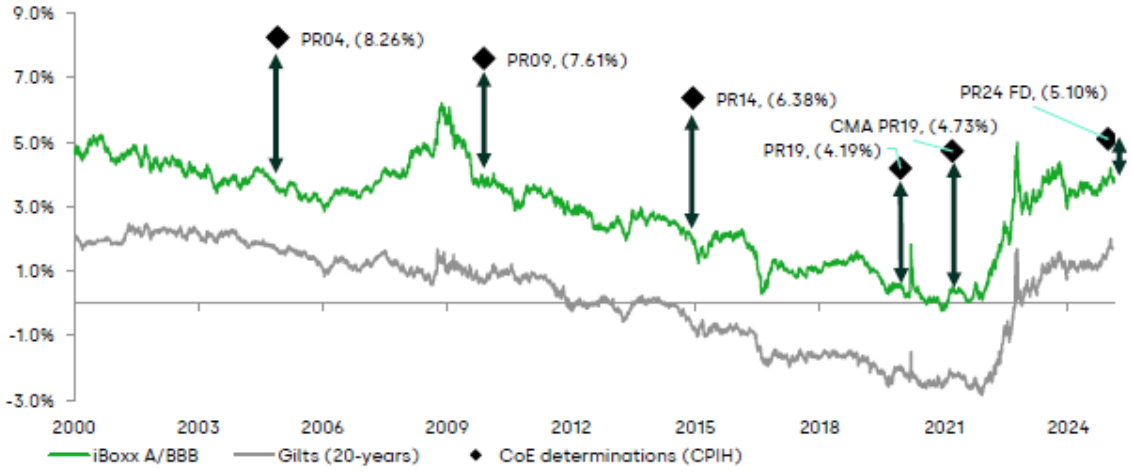


Figure 10. Spreads of cost of equity determinations relative to selected cost of debt benchmarks (CPIH-real)

Another comparison can be seen in the operational Return on Regulated Equity (RoRE) delivered in 2023/24 between the energy and water sectors.

For the latest set of data available in 23/24 all companies in the water sector are underperforming on operational RoRE. By contrast, there is a broadly even split of energy companies with a much narrower spread of RoRE around the base allowed return. The water median operational RoRE is -4.3% vs energy's +0.4% This points to an issue with sector level calibration. It is clear there are higher returns available in energy with its separation into different activities. We think a model which separates the water licence and RAB and has different regulatory design with water and wastewater, alongside greater competition such as household retail, can close this gap between returns.

[22] Oxera (April 2025) for Water UK: Investability

Operational RoRE impact on base returns for 23/24 across water, gas and electricity regulated companies (source: derived from Southern Water PR24 redetermination statement of case, 21 March 2025)

	2023/24 median sector operational RoRE %
Ofgem – Transmission	+0.8%
Ofgem – Electricity Distribution	+0.7%
Ofgem – Gas distribution	-1.4%
Ofwat – Water only companies	-5.0%
Ofwat – Water and sewerage companies	-4.3%

Figure 11. 2023/24 median sector operational RoRE %

Ofwat set a lower cost of equity at PR24 FD than Ofgem have indicated for RIIO-3

Commentators suggest water should be seen as risky than energy, which the operational risk data shown above also supports.

"The lower cost of equity allowance for water companies [relative to regulated energy] *implies that the overall risk should be lower in the water sector. However, the water companies in England and Wales face heightened public and political attention, and tougher performance incentives may prevent them from achieving the allowed returns\[23]"*

Barclays – *"Ofwat sees water as a lower-risk asset than other regulated assets. We do not see evidence of this, nor do investors."[24]*

Q46. What options, if any, would incentivise investment in the water sector?

A recent Barclays annual investor survey confirms a deterioration in investor sentiment towards the UK Water sector. The majority of investors view the current regulatory framework as unhelpful, hindering their investment appetite for the UK water sector. Investors see Ofwat's willingness to increase water bills, but there is more focus on company performance and less on attracting investment. Additionally, there is a negative view on the ability of water companies to perform against regulatory contracts.

Regulation needs to be simplified to allow for water companies to perform against regulatory contracts, which will attract investment. We need to ensure ongoing investor confidence to deliver for customers, which can be achieved by having a framework that is simple and low-risk. Investors seek stable and predictable regulation. We need coordination of how the government's strategic approach joins up with regulator policies.

It could be possible to split the licences of water and wastewater companies. This could mean that each company has different risk profiles and would be able to operate differently. For example, wastewater companies are deemed higher risk, whereas clean water would be lower risk. This could then attract different types of investors to each type of water business, increasing the attractiveness of investing the sector. If the licences were split, this could also lower the cost of equity in water and wastewater overall.

Additionally, if water had less risk than wastewater then we could have different lengths of price controls, with sufficient reopeners. This would allow separate water and wastewater licences to have more continuity on operating cost and capital investment. Overall, splitting the licence could reduce the cost of capital for water companies. Therefore, this could result in reduction in the cost of finance to consumers.

[23] Moody's, August 2024, Ofwat's draft determination increases sector risk, page 8,
[24] Barclays, August 2024, Breaking the water cycle – no longer so positive, page 64,

Q47. How does the public and political portrayal of water companies in the media and elsewhere affect the attractiveness of the water sector to investors?

Negatively affects the attractiveness of the water sector to investors.

Q48. To what extent should further competition in the water industry be encouraged through regulation?

There are several areas where competition for both customers and in developing infrastructure should be encouraged, which could produce better outcomes at a lower cost than relying on monopoly regulation alone.

It is an anathema for customers that there is no choice in household competition, which we address in response to Q50. Ofwat can also improve the speed with which it deregulates existing competitive markets, such as NAVs, which we also cover in Q50. We also see greater competition opportunities in bioresources, which would be boosted if the Government deregulated the current prohibition of mixing bioresources with other waste streams. The revised governance arrangements we recommend in Q12 and Q13 would allow for improved competitive market forces on the water service for new infrastructure provision when compared with the complicated individual scheme solutions required for Direct Procurement for Customers (see Q51). Dieter Helm's suggestion of bundled negotiated contracts between a catchment planned in water and the incumbent, with split RAB and licence framework, would support this.

In 2017, the non-household market successfully opened, an important step forward in introducing competition into the sector. At the time, the decision was taken to not extend retail competition to household customers. The retail market has delivered excellent customer service and strong shareholder returns. Since its introduction, the business retail market has been successful in delivering excellent customer service.

Pennon Group is home to two leading business retailers, which deliver exceptional customer service to non-household customers. Pennon Water Services and Water 2 Business score 4.8/5 and 5/5 in trust pilot ratings, respectively, with a combined market share of 15% nationally. The market has also delivered shareholder value, with Pennon's retail businesses valued at c.£1.5bn as of 2025.

Building on this success, now is the right time to consider development of the household retail market. We know that our customers want to have greater choice. In March and April 2025, we undertook research with social research agency Accent. The research is based on a national (England and Wales) sample of 1,521 online interviews with water consumers aged 18+. The survey data has been weighted to be representative of adults in England and Wales. The survey looked at appetite for greater competition in water retail services.

Awareness and understanding of current market arrangements is high. We found that the vast majority (80%) of customers are aware that they cannot switch water supplier, and that three in five (62%) say they *should* have the option to switch.

We also find that appetite for switching is comparatively high. The latest Ofgem research finds that just one in five (19%) energy consumers say they are likely to switch supplier in the next three months.[25] A Simon Kucher survey found that just 35% of UK energy consumers would be willing to switch within 12 months. This compares to just under half (45%) of water consumers, who say they would be likely to switch in the next year if they had the choice.[26]

Unsurprisingly, when asked what benefits switching could offer, a majority (62%) cite lower prices. Similarly, the vast majority (90%) say that lower prices would be an important factor in their decision to switch supplier.

However, price is not the only factor influencing customer behaviour. A significant minority (41%) say the choice to save money by reducing their water consumption would be a benefit of switching, and two in five (44%) customers cite improved service quality. In the same vein, a majority (80%) say better customer service would be important in their decision.

[25] Ofgem, Consumer Impacts of Market Conditions Survey Wave 5

[26] Simon Kucher, Energy Study 2022: Customers increasingly willing to switch gas and electricity providers

Historically, retail margins in the water sector have been considered too low to drive switching. However, a lot has changed in recent years. Water bills in England and Wales are set to rise by 36% over the next five years, meaning that water will make up a greater proportion of household and business expenditure.

At the same time, with demand for water outstripping supply, Government has set new targets for the public to reduce water demand. Half of the gap in public water supply will need to be delivered by changes in public behaviour. This will result in significant changes for our customers, and excellent customer interaction and innovation will be more important than ever.

In both the energy and water retail markets, competition has driven value-added services to drive behaviour change. Water retailers now offer specialist leak detection, water management solutions, upgraded meter reading schedules, and water efficiency advice and audits. Leading energy retailers, such as Octopus Energy, offer an even broader range of services to households including heat pump and car-financing. Just under half (48%) of water customers say they would be interested in switching to a supplier that offered other benefits such as different tariffs or more innovation.

The public want to take individual actions to protect the environment. Three in five (61%) water customers say the option to buy new products and services that help save water would be important in their decision to switch supplier. Half (48%) say they would be willing to pay *more* for sustainably sourced water. Retail competition in the energy sector has driven a significant increase in sustainable tariffs, with customers paying a premium for carbon-neutral energy. In the same way, retail competition in the water sector would create opportunities for introducing tariffs that allow customers to save money and protect the environment.

Water companies are already innovating to drive behaviour change. SWW have introduced four tariff trials focused on driving water efficiency. Our current trials have found higher water users responding to the trial by significantly reducing their water use (compared to the previous year), saving both money and water. In this way, innovative tariffs can ensure that customers are charged more fairly for the water they consume. Developing the Household retail market would create an even larger market for tariff innovation, with retailers seeking to differentiate themselves in the market and deliver value-added services.

Q49. Which of the following schemes, if any, have <u>failed</u> to provide effective levels of competition and efficiency?

- Water bidding market
- Bioresources market
- Direct Procurement for Customers (DPC)

Q50. Which of the following changes to competition schemes, if any, would improve outcomes for the sector?

As highlighted in our response to Q48, we believe the time is right to introduce retail household competition. In parallel, more can be done to promote effective competition in existing markets, where persistent frictions and regulatory inconsistencies continue to hinder progress.

Pennon Water Services is now one of the leading water and wastewater retailers, supporting over 150,000 business customer accounts across the UK. While the business retail market has brought some success, significant barriers remain. These include overly complex market codes, inconsistent wholesaler engagement, and regulatory burdens that can disproportionately affect new entrants.

The Government's own post-implementation review cites policy design flaws and market frictions as contributing to lower-than-expected levels of market entry. However, the experience of other sectors—particularly energy—demonstrates that such challenges are solvable. Ofgem's frameworks have supported market entry through clear rules, proportionate regulation, and a stronger policy steer. Similar clarity and commitment are now needed in water.

In both the business retail and NAV markets, regulatory burdens are increasing—often exceeding those placed on incumbent wholesalers. This reflects a lack of real choice for customers and contributes to inefficiency. A clearer government position on the future of competition would help reduce this regulatory creep, as would targeted simplification of codes and more consistent decision-making by Ofwat.

Currently, Ofwat often relies on further reviews and data analysis, rather than setting clear expectations or making timely regulatory decisions. While voluntary measures by incumbents can be useful, they create complexity and uncertainty for new entrants, who are left to navigate multiple wholesalers and pursue competition complaints rather than having clear, enforceable standards. A shift to clearer, upfront rules—with the ability to refine over time—would encourage more consistent behaviour and reduce barriers to entry.

Pennon is actively engaging with Ofwat to explore reforms that would unlock competitive supply solutions. Our Flexible Local Supplies innovation project (see Case Study 23 below) has looked at pricing approaches in other regulated sectors, working with Ofwat's licensing team to identify learnings for application to the water sector. This work is feeding directly into ongoing Ofwat reviews.

Our collaboration with Castle Water and RWE in the redevelopment of the Didcot site is another case in point. A fair and transparent bulk supply price from Thames Water is central to the commercial case for both partners. The ability to unlock smaller water resource schemes through such partnerships depends on clear regulatory support, and we welcome Ofwat's engagement in this area.

In bioresources, the lack of spare capacity is a key barrier to competitive market development. A clear policy change from Defra to allow co-digestion of other organic wastes would unlock investment and scale in regional bioresources plants—particularly in growth areas like the South West. This would not only create environmental benefits but enable a more dynamic, investable market model with stronger third-party participation.

Case Study 23 – Developing the market in water supply - Flexible Local Supplies.

SWW are leading the Ofwat Innovation Fund Flexible Local Supplies Project. This is a pilot project looking at how the existing (but so far unused in practice) combined water supply competition framework could be used in the water sector.

The objective is to demonstrate how competition could work by taking smaller and underused water abstractions, treating the water and injecting into the existing water networks. This will supplement major schemes and could provide greater resilience in the same way that distributed renewable energy sources do in that market.

The pilot commercial model being developed as part of this project is based on the RWE site that was formerly Didcot power station in the Thames area. It tests how this water supply could support Castle Water and its supply to business customers as a retailer.

As well as the potential to unlock smaller water resources, the learnings should feed into the bulk supply development work for new water resource schemes such as Cheddar 2. This is a good example of how the innovation fund and Ofwat's major projects framework can help to support long term planning and growth in the water sector. It is a form of competition that could also support the evidence base for regional catchment planners and systems operation models. The final report on this pilot project that will inform future water competitive market frameworks through Ofwat's innovation fund is due by the end of 2025.

Q51: To what extent would greater market tendering of infrastructure delivery projects improve outcomes?

Market tendering of infrastructure delivery projects can play a valuable role in the sector, and we are actively exploring this with RAPID and Ofwat's Major Projects team. However, Direct Procurement for Customers (DPC) may not be the most appropriate route due to its complexity and the need to redesign the model for each individual project. Instead, we are working collaboratively to identify more flexible alternatives.

Between Pennon and Wessex Water, we have three major reservoir projects in the West Country that will significantly support economic and industrial growth across the region. These schemes raise broader questions around the alignment of infrastructure development with government and regulatory ambitions to reduce per capita consumption and overall water demand, particularly in the business sector. It is important that market tendering and competitive delivery mechanisms recognise and respond to these parallel objectives.

One current barrier is Ofwat's approach, which assumes that associated or parent companies of incumbents cannot participate in tenders. We believe these restrictions are unnecessary and risk excluding valuable expertise. Allowing incumbents to bring delivery capability into the market, while maintaining transparency and independence, could offer better value for customers. Ofwat is currently treating the three West Country reservoir projects as standalone schemes, but in reality their eventual delivery will reshape regional water efficiency and supply sharing.

We are at an early stage of working with Ofwat to develop a "Shared Resource Authority" model—drawing inspiration from system operation frameworks in the energy sector—that could enable better long-term planning and optimise value through shared regional delivery.

Separately, we are leading a pilot project with Castle Water, Binnies, the University of the West of England, and RWE through Ofwat's Innovation Fund (see Case Study 22 for more information). With Ofwat's support, the project has identified several regulatory barriers to effective market tendering and entry, including bulk water supply charging structures and clarity of commercial frameworks. Drawing lessons from other sectors, such as energy and telecoms, the project is developing proposals that could inform Ofwat's future approach to market-led solutions.

We aim to conclude this work in 2025, with the ambition of feeding into the broader competitive framework and helping to signal to potential new entrants how local and spare water resources can be unlocked and turned into commercially viable opportunities.

Unlocking such investment opportunities—whether through market tendering or other flexible delivery models—requires a more enabling regulatory environment and a willingness to evolve legacy frameworks. With the right reforms, the sector can better balance growth, efficiency, and innovation while maintaining affordability and resilience.

Section 5: Water Industry Public Policy Outcomes

Q52. Do you believe that legal and/or regulatory requirements would benefit from review or consolidation?

We believe a legal and regulatory reset is needed to respond to the evolving demands on the water sector. Customer expectations have shifted significantly, with increasing public and political focus on wastewater services, particularly storm overflows. The result has been greater scrutiny of water companies, denting public confidence and creating uncertainty for investors. At the same time, current legal and regulatory frameworks are struggling to accommodate the regional variation in water systems and the complex, catchment-based challenges faced across England.

We see a clear case to elevate water company assets to the status of critical national infrastructure. This would modernise the legal framework and ensure that companies have the right powers and protections to manage and maintain essential services. At present, water companies carry full liability for issues like sewer blockages and third-party damage, but have limited legal recourse or enforcement powers to prevent them (see Case study 8 for more information).

In parallel, we believe regulatory frameworks need to differentiate more clearly between clean water and wastewater. Drinking water systems operate as an integrated, national network, and should continue to be regulated at that level. Water companies can move supply across regions through careful planning and investment, and the DWI already applies consistent national standards to ensure water quality wherever you live.

By contrast, wastewater services are inherently local, shaped by geography, topography, land use, and development pressures. Regulation must better reflect the local nature of these networks to be effective. For example, the challenges faced by a coastal catchment with bathing water pressures are very different to those in an upland catchment dominated by agriculture or an urban area struggling with surface water runoff. Yet current wastewater regulation is largely removed from the local planning and governance systems that shape these pressures.

We propose that future regulation of wastewater should sit within local strategic governance structures, aligned with the government's wider devolution agenda. This could include oversight by Mayors, Combined Authorities or Unitary Councils or County Councils, with appropriate coordination across boundaries. Given the complexity of catchments, we propose the establishment of an independent water leadership role, appointed jointly by local authorities within a catchment. This Commissioner would report to a local Wastewater Committee made up of elected representatives, ensuring clear local accountability.

Such a devolved approach would strengthen public trust, support more joined-up decision-making, and help ensure that regulation reflects the specific needs and priorities of local communities. It would also complement the unprecedented investment now being delivered across the country—ensuring that the benefits of that investment are maximised through regulation that is responsive, place-based, and outcomes-focused.

Q53. Do you believe that the system of environmental regulation, monitoring and enforcement is ensuring water company compliance with environmental standards? (Please select one)

To some extent

Q54. Which of the following changes to water industry environmental regulatory requirements, if any, would improve outcomes from the sector? (Please select all that apply)

A review and rationalisation of the water industry environmental legislative framework

Q55. Which of the following changes to the water industry environmental regulation, monitoring and enforcement framework , if any, would improve outcomes for the sector?

Regulator enforcement:

The Government has made clear that, to balance consumer and environmental protection with growth, regulation needs to be proportionate and fair. Enforcement is a necessary and important activity for driving trust and confidence among the public. Fair and proportionate regulation increases investor confidence and creates a vital level playing field for business.

We are concerned that regulation, and regulator enforcement activities specifically, have become increasingly complex and slow. To address this, the Corry review of regulation has advocated for a fair and consistent 'thin green line' for regulatory compliance, with trusted partners earning autonomy.

Below, we first explore current approaches to enforcement, focusing on the work of the EA. We then explain the impact of enforcement on investor confidence, showing that the EA's approach to prosecutions is leading to uncertainty. We then make recommendations for alternative approaches.

Current Approaches to Enforcement

Current approaches to enforcement focus heavily on prosecution, which is slow and, too often, disproportionate. Here we show this, based on our experience of the EA's current approach to enforcement.

Most environmental offences are strict liability. This means that, as proving the offending is straight-forward and guilty pleas almost always submitted, cases can and should be settled quickly. However, it is taking many years for EA prosecutions to reach their conclusion. For example, in April 2023, SWW was sentenced for offences occurring in 2016 to 2020. Current charges due to be sentenced in September 2025 allege offences from 2015 to 2021.

The EA also tends to overstate culpability and harm beyond what the evidence can sustain to secure higher penalties. Of the 28 incidents for which SWW has been prosecuted since 2015, the court has determined that in 36% the evidence did not support the EA's assessment of culpability and in 43% the evidence did not support the EA's assessment of harm. As a principle, it is important that cases are not inflated, and that penalties are fair and proportionate based on a neutral assessment of the evidence. A neutral, evidence-led assessment allows quicker resolution of cases.

A further source of complexity is the cross over between Ofwat's enforcement (see Figure 1), Ofwat's outcomes and PCD incentives and the local enforcement of regulators. There is generally a clear distinction between Ofwat and the DWI, but this is less clear between Ofwat and the EA. This is because the Water Supply (Water Quality) Regulations set out a clear role for the DWI for their enforcement distinct from Ofwat, but Ofwat (in parallel with the Secretary of State) is an enforcement authority for many of the duties and obligations in the Water Industry Act.

Ofwat's enforcement policy (last updated 2015) was historically risk based, and suggested they would only take action where they were better placed to do so than other regulators. However, more recent actions and current cases appear to suggest that Ofwat are considering and taking enforcement action even where activities may comply with EA permits, or are also subject to incentive regulation.

The Impact of Prosecutions on Investor Confidence:

There is no question that good regulation needs enforcement and that non-compliance should cost a business more than compliance.

In criminology it is accepted that it is the certainty of apprehension rather than the severity of punishment that is the more effective deterrent. To achieve behavioural change financial penalties should be prompt, clear, consistent, fair and proportionate. Leadership teams and investors then have a clear line of sight to the costs of failure to comply, and a strong financial incentive to comply.

Unfortunately, the current all-or-nothing, slow, unpredictable lottery of prosecutions does very little to achieve any of these things. Investors dislike uncertainty. Investigations running over many years, with court fines that are highly variable between courts, undermines investor confidence.

Prosecutions have an important role in ensuring that there are consequences for the most serious offences. However, they should be reserved for the most serious cases, where a criminal conviction is necessary. For less serious offending, the answer is the prompt application of clear, consistent, fair and proportionate financial penalties.

Recommendations:

In our view, the EA should make use of variable monetary penalties (VMPs) and Enforcement Undertakings (EUs) in preference to criminal prosecutions for all but the most serious water company failings. These enforcement tools can impose financial penalties quickly, ensuring non-compliance is penalised in a timescale that allows the sanction to follow promptly after the failures, ideally within the same financial year.

This approach is consistent with the EA's own enforcement and sanction policy. The policy makes clear that the EA's limited resources should be targeted towards activities with the greatest risk of serious environmental damage, those undermining the regulatory system, deliberate offending and organised crime.

Below, we comment on the benefits of VMPs and EUs.

Variable Monetary Penalties (VMPs):

Following the Water (Special Measures) Act 2025, VMPs can be issued by the EA based on a civil standard of proof. VMPs provide clear, consistent, fair and proportionate financial penalties of the sort that leadership and investors can understand, creating strong but appropriate incentives to comply. However, VMPs will only achieve these objectives if the following safeguards are in place:

- Unlike the adversarial nature of prosecutions, where prosecutors and defendants present their arguments and a judge decides, VMPs require the investigating Agency to also make decisions on fines (known as inquisitorial proceedings). It is therefore important that fines are measured and reflect evidence from both sides, not just the EA's viewpoint;
- To ensure consistency and fairness, decisions should not be taken locally, but through a national panel; and
- The existing safeguard of an appeal process to the First-tier Tribunal (FTT) is important. However, there is a risk that the FTT will rapidly become clogged. Care will need to be given to ensure that regulator decisions on VMPs are inquisitorial and not adversarial to avoid this.

Enforcement Undertakings

Properly understood, EUs are no different to VMPs, but with the added benefits that the offender is proactively offering them as a way of making amends. Projects that benefit from the financial penalty can be tailored to the local environment and community impacted by the offending. They also save the EA time and costs in enforcing.

Work is needed to build trust in EUs among the public and interest groups. We hear concerns from regulators that eNGOs increasingly challenge the use of EUs. SWW has not had an EU offer accepted in 6 years.

In our view, the EA should be encouraged to use all tools available, to ensure a proportionate and fair outcome for companies, customers and the environment. EUs deliver for all parties, allowing companies to investigate and remedy their own non-compliance, pay the cost for non-compliance, and work with communities and the environment to restore harm.

Case Study 24 – Overlapping enforcement policy

A source of regulatory complexity is the cross over between Ofwat's enforcement, Ofwat's outcomes and PCD incentives and the local enforcement of regulators. There is generally a clear distinction between Ofwat and the DWI, but this is less clear between Ofwat and the EA. This is because the Water Supply (Water Quality) Regulations set out a clear role for the DWI for their enforcement distinct from Ofwat, but Ofwat (in parallel with the Secretary of State) is an enforcement authority for many of the duties and obligations in the Water Industry Act.

Ofwat's enforcement policy (last updated 2015) was historically risk based, and suggested they would only take action where they were better placed to do so than other regulators. However, more recent actions and current cases appear to suggest that Ofwat are considering and taking enforcement action even where activities may comply with EA permits, or are also subject to incentive regulation. Ofwat's recent consultation on their enforcement policy[27] states that *"If we are satisfied that a regulated company is currently breaching, or is likely to breach (that is, in the future), any condition of its appointment or licence, or any statutory or other requirement that we can enforce under section 18 WIA91, we are under a duty to impose an enforcement order unless certain limited exceptions apply"*

This is an absolute statement rather than a risk based and stepped approach to enforcement set out in the guidance for this consultation, Given the overlap we show above between performance obligations, EA and Ofwat coverage, and the very general nature of the duties it is very wide ranging statement of enforcement with the exceptions being limited to trivial matters. Ofwat are here stating the letter of the current legislative and licence arrangements and this is clear evidence that clarification of responsibilities is needed to avoid duplicate and potentially conflicting enforcement and incentive penalties for the same activities.

Q56. What changes, if any, could be made to the drinking water regulatory system to maintain world leading drinking water quality?

- Changes to DWI's regulatory powers to better regulate new water supply mechanisms and approaches
- Addressing regulation 31 supply chain challenges to support innovation
- Other – changes to water quality regulation, see below.

We are open to the possibility of changes to water quality regulation. However, we believe the need for reform in this area is limited. The Drinking Water Inspectorate is well-respected and effective.

A great challenge is ensuring supply in the light of the growing population demand and the effects of climate change on that supply.

Looking ahead, we are concerned about nascent issues such as PFAS and microplastics, and ongoing challenges with lead. In our view, it is critical that there is rapid progress in solving these issues, and that all forms of regulation supports this.

[27] Ofwat, Enforcement Guidance

Q57. To what extent is the overall water regulatory framework securing resilient long-term supplies of water?

To some extent

Q58: What changes, if any, could be made to the overall water regulatory framework to ensure it can secure a resilient long-term supply of water? *(Please select all that apply)*

- Changes to regulatory responsibilities or introduction of new requirements or standards to oversee delivery
- Abstraction reform
- New water demand and efficiency policies
- Other – increase flexibility and evidence based regulation

The regulatory framework must become more flexible and evidence-based, enabling long-term planning and balancing the environment with customer needs. We set out our wider views in questions 12 and 13, but in summary, we believe a single, coordinated Plan for Water should set national targets, funding envelopes, and delivery expectations and trade-offs.

At the local level, the focus should be on delivery, within a streamlined national framework. While many of the right structures exist today, the current system remains overly rules-based, slow to respond to actual risks, and misaligned with long-term priorities.

We support a shift towards evidence-led, risk-based regulation – an approach that is already working well for drinking water quality and should be extended to water resources. Key long-term tools like Water Resources Management Plans (WRMPs) and LTDSs should feed more directly into national policy, highlighting strategic and delivery risks.

We also support abstraction reform. Licences must reflect modern hydrological realities and enable resilience and innovation. For example, we have already relinquished enough abstraction to supply the entire Bournemouth Water region, and we expect abstraction in that region to halve again. Yet there remains uncertainty around the infrastructure needed to deliver this – underscoring the need for greater alignment and clarity across the regulatory framework.

We are committed to reducing demand in line with the Environment Act targets. We are trialling innovative tariffs designed to promote fairness and incentivise lower use – especially in areas where peak seasonal demand is high. However, in some areas, public and parliamentary pressure has challenged these reforms. This highlights a tension between national demand targets and local acceptability.

A key barrier is the lack of data on property usage. Our region has high numbers of second homes and holiday lets, but we cannot currently identify these properties or tailor tariffs accordingly. A national property register – as proposed in the Levelling Up and Regeneration Bill – would enable smarter, fairer charging.

It is also vital to create stronger levers to drive demand reduction beyond tariffs. Water companies currently have no statutory targets for demand reduction and few powers to influence behaviour. Progress depends on partnerships with government, local authorities, and civil society.

There is also a critical need to mandate water efficiency in new homes and create stronger incentives for retrofitting older housing stock. Consumers need greater visibility of product-level water efficiency, and a clearer link between water and energy efficiency. Around half of household water is heated, accounting for 18% of home energy use and 12% of a typical gas-heated home's energy bill. Defra and the Department for Energy Security and Net Zero should work together to support joined-up policy and incentives.

Q59. To what extent does the overall water regulatory framework support or hinder infrastructure resilience? When considering your answer, please think about future pressures including factors such as climate change and population growth.

Somewhat supports infrastructure resilience

Q60. To what extent does the overall water regulatory framework support or hinder infrastructure security? When considering your answers, please think about evolving security threats such as cyber security.

Somewhat supports infrastructure security

Q61. To what extent does the overall water regulatory framework support or hinder effective management of supply chain risks? When considering your answers, please think about disruption in and constraints from supply chains.

Somewhat supports effective management

Q62. What changes, if any, could be made to the overall water regulatory framework to better support infrastructure resilience?

Changes to the Price Review to support infrastructure resilience (for example, calculating base expenditure with reference to asset condition, or linking base expenditure to investment plans)

Q63. What changes, if any, could be made to the overall water regulatory framework to better support infrastructure security?

No changes are needed

Q64. What changes, if any, could be made to the overall water regulatory framework to better manage risks from supply chains?

- Changes to planning processes to ensure supply chain constraints are factored (for example, factoring supply chain into planning decisions)
- Changes to cross-government policy on supply chain constraints (for example, agreeing investment plans with other sectors)
- Changes to the Price Review process to address supply chain constraints (for example, moving from a 5-year Price Review process)

Q65. To what extent does the overall water regulatory framework currently support or hinder innovation?

Somewhat supports innovation

Q66. Which of the following changes in the sector, if any, would enable innovation outcomes?

- Changes to the way companies and regulators approach risk (for example, introducing a regulatory 'sandboxing' tool)
- More outcome based regulation to allow flexibility on delivery approaches
- Changes to the Price Review process to support innovation (for example, treating research and development spending separately in the Price Review)

Q67. What opportunities, if any, do new technologies present for companies and the regulators?

Funding research and harnessing new technology to develop innovative solutions to the challenges and opportunities we face as a sector is crucial. We welcome the Ofwat innovation fund as a major incentive to develop innovation and stimulate transformative change. Having a dedicated funding stream for innovation projects helps accelerate ideas and fosters collaboration across the sector.

We recognise the need to invest in innovation to future-proof our business and improve the service we provide to customers. We are leading the charge by collaborating with partners to build a suite of projects designed to make a difference now, and in the future. CREWW is backed by £21m from SWW, in collaboration with Exeter University which has achieved a gold-standard for excellence in research and teaching.

Working with CREWW, we have identified several key projects. We are acutely aware of the need to understand how much microplastic is present in water that is abstracted, treated, supplied as drinking water, and then collected, treated and returned to the environment. We also need to know how we can reduce the presence of plastic at every stage, to protect the environment and the consumer, and to prepare for future regulation. We have established a state-of-the-art 'CREWW Microplastics Lab', which will enable further ground-breaking work on microplastics at a scale to meet the needs of the industry.

We have also funded a pilot project to generate a groundwater infiltration risk map for a pilot study in the SWW sewer network, highlighting with a RAG (Red, Amber, Green) rating for areas most prone to groundwater infiltration and enabling operations staff to proactively target site investigations. By cross-referencing this new map with areas of high CSO spill and pollution events, it is envisaged that works targeted around infiltration will contribute to a reduction in these events. We have plans to extend the project to cover the entire SWW network to help identify novel and effective approaches to go beyond the current commercial solutions and look to improve efficiency beyond pipe lining and replacement.

For many years, the water sector has had to control the impact of lead in the water supply by orthophosphate chemical dosing, adding additional cost to the treatment process. Through collaboration with CREWW, we are funding an upgrade to our model used to predict the location of lead pipes in our water supply network. The new model will utilise SWW data, whilst also employing artificial intelligence to update the model, which will help bridge gaps in the existing data.

Aside from our work with CREWW, we are currently developing new approaches to using artificial intelligence to assess telemetry and GIS data to inform our clean water asset maintenance and renewal programmes. This project is being led across industry, with support from Ofwat's innovation fund. By working together with regulators, industry and partners on innovative technology, we believe we can deliver a water sector fit for the future. By working together with regulators, industry and partners on innovative technology, we believe we can deliver a water sector fit for the future (see Case Study 14 for more information).

Section 6: Ownership

Q68. What impact, if any, has consolidation of water companies had on their performance?

Mergers have historically generated significant benefits across the water sector. These include improvements in operational efficiency, leading to cost savings and enhanced service quality for customers. Mergers drive economic growth by creating more robust and resilient companies that are better positioned to invest in infrastructure and innovation. Additionally, mergers can attract investment by creating more financially stable entities that are appealing to investors.

Evidence points:

- Europe Economics[28] note that mergers in the UK water sector have led to significant operational efficiencies: cost savings and enhanced service quality for customers.
- The creation of Scottish Water through the merger of three water authorities led to a 40% reduction in operating expenditure, as well as ensuring Scottish Water is better able to support environmental goals – including achieving net zero emissions by 2040 on operational and embodied carbon[29].
- Pennon Group has completed beneficial mergers with Bristol Water (2021), SES Water (2024), and Bournemouth Water (2016), passing benefits to customers through lower bills - see *Case Study 25 below on the Bristol Water merger.*

We need a flexible approach to mergers where they are demonstrably beneficial to customers and the sector, that are allowed to proceed, whilst maintaining the ability for regulation to be effective.

Maintaining Comparators

Comparators are currently an important part of regulatory assessments and benchmarking. The focus on maintaining a sufficient number of comparators should not overshadow the broader benefits that mergers can bring.

In competitive markets, the primary objective is to promote efficiency and it is essential to ensure that the regulatory framework does not inadvertently create counter-incentives. Currently the Special Merger Regime[30,31] for the water sector will identify the greatest possible detriment – however unlikely - and by definition will always conclude there to be a greater detriment when an efficient company acquires another relative to when an inefficient company does so, when the former is economically more desirable and leads to greater overall sector improvements.

In the cases of Bristol Water and SES Water, we agreed with both Ofwat and the CMA that separate wholesale price controls would be put in place in order to maintain the number of wholesale water comparators at 17, addressing any potential detriment in full, whilst allowing the benefits of the mergers to be realised.

However, it is important to note that even with fewer companies, effective comparisons can still be made, as evidenced by the energy sector where Ofgem successfully uses eight comparators for gas distribution. We would welcome a wider consideration of comparative benchmarking in the future.

Customer Benefits

Our customers have directly benefited from economies of scale and the removal of the small company premium. We have returned benefits to customers through our WaterShare+ scheme – ahead of the regulatory mechanisms to return outperformance. For example, in 2022, after the acquisition of Bristol Water, through WaterShare+ we returned c.£20m merger benefits to customers - ahead of any regulatory mechanisms – with customers receiving £13 as a reduction on their bill or as a share in the Pennon Group. A further issuance is planned following the SES Water merger.

Merger benefits extend beyond direct customer advantages to include equity benefits, such as reducing the financial risk associated with highly geared companies. Customers have benefited significantly from being part of a larger group with sustainable financing – we have successfully addressed the unsustainably-high gearing

[28] rpt_com20151021mergers.pdf
[29] https://wics.scot/system/files/2022-02/Scottish%20Water%20merger%2C%20and%20our%20experience.pdf
[30] Ofwat-approach-to-mergers-and-Statement-of-Methods-April-2025.pdf
[31] Water and sewerage mergers: CMA49 - GOV.UK

levels and financial resilience issues in both Bristol Water and SES Water, thereby reducing the financial risks faced by customers. Yet these benefits are not expressly considered in the Special Merger Regime.

Merger benefits include providing access to greater capital and investment, ensuring improved service quality and infrastructure development.

Evidence point:

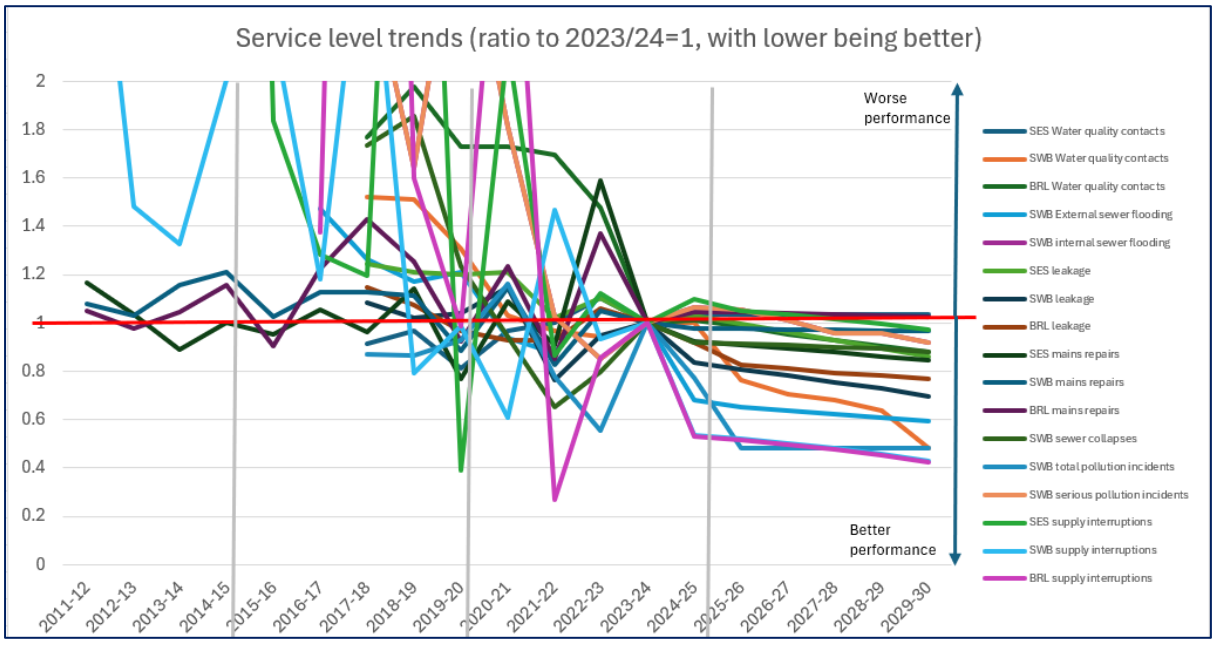
- Bournemouth Water - landmark investment to upgrade two water treatment works is currently underway. This involves £200m investment to upgrade the Alderney and Knapp Mill water treatment works with state-of-the-art ceramic membrane technology, which will sustainably produce the highest quality water for now and the future. As a smaller, standalone entity, Bournemouth Water had limited financial resources and borrowing capacity. Given this, and the regulatory regime, these upgrades would not have been affordable without the merger, highlighting the financial benefits of being part of a larger group. Absent the merger, Bournemouth Water would have faced difficulties in securing the necessary funding and managing the financial risks associated with such a large-scale project.
- Isles of Scilly - SWW became responsible for water and wastewater services to the Isles of Scilly in April 2020. Subsequently, we are investing to address public health and resilience issues in water supply, and installing first time sewage to protect the water environment. The average cost of £40k per property would not have been possible without consolidation.

Additionally, mergers facilitate the sharing of best practices across the group, leading to improved operational standards and innovation. This collaborative approach ensures that all parts of the group benefit from the collective expertise and experience, driving continuous improvement and efficiency. For example, the DWI's Compliance Risk Index (CRI) score for the Isles of Scilly fell from 57 in 2021 to 10 in 2023 (compared to the industry target of 2).

Customers have benefited from improved access to capital, economies of scale, risk diversification, enhanced investment capacity, loss of the small company premium, lower gearing, operational efficiencies, and sharing of best practices.

Operational performance benefits

Serviceability is converging, as shown in the graphs below.



Flexibility

A more flexible approach to future mergers will greatly benefit the water sector. There should be an openness to merging different parts of the value chain – to support innovation and allow companies to optimise their operations in ways that best serve their strategic goals and their customers.

Allowing mergers between companies that operate in different segments of the water supply chain could lead to more specialised and efficient operations. This could include mergers between companies focused on water resources, water distribution, or wastewater management at the catchment level. By enabling such mergers, the sector can benefit from the combined expertise and resources of these companies, leading to improved service quality and operational efficiency.

A flexible approach would encourage companies to explore new and innovative solutions to the challenges facing the water sector. This could include the adoption of advanced technologies, the development of new business models, and the implementation of sustainable practices. By fostering an environment that supports innovation, the regulatory framework can help drive continuous improvement and ensure that the sector remains resilient and adaptable to future challenges.

A regulatory approach that allows for flexibility in the types of mergers will enable the water sector to fully realise the potential benefits of mergers, including enhanced financial resilience, improved operational efficiency, and greater innovation. This will ultimately lead to better outcomes for customers and the sector.

Case Study 25 – The benefits of consolidation: the Bristol Water merger.

In February 2023 Pennon completed the merger of Bristol Water into the SWW company under one combined licence.

During the Pennon/Bristol Water merger process, following the assessment processes set out in the Special Merger Regime for water, the likelihood that the merger would cause a detriment to Ofwat's ability to make comparisons was found to be low. Undertakings in Lieu (UILs) were agreed that would remove this risk, and so maintain the integrity of regulation and comparisons, whilst not preventing the ability to maximise customers benefits and synergies. Compliance with the UILs has been in full.

Financial benefits

Bristol Water customers benefited immediately following merger clearance from the withdrawal from customer bills of the 'small company premium' that was allowed in the PR19 final determination – resulting in a bill reduction of £2 per customer per year. Costs and cost drivers have continued to be reported separately for BRL and SWB, in line with reporting rules. This has facilitated separate water wholesale price controls based on 17 industry comparators; as well as combined retail price control. Pennon has complied with UILs, providing assurance to the CMA as part of the current PR24 price review.

SWW, Bournemouth Water, and Bristol Water operates as a combined entity to allow benefits to be delivered to customers and the sector. The benefits to customers have been significant and in line with those forecast in the Bristol Water Merger Impact Assessment. Through robust integration, the merged business has delivered c.£20m of savings per annum. This has been delivered via a transformation programme: delivering chemical savings from introducing new treatment alternatives which were more cost effective, employee rationalisation and other efficiency gain programmes. The integration of operational and back office functions has yielded recurring annualised savings across engineering, finance and operations. We have also seen procurement benefits, where cost reductions are generated as a result of re-procurement where the scope has been enlarged to include both operating areas. In addition, following the merger, Pennon gave up £1.1 million p.a. of Bristol Water revenue allowance for the final three years of AMP7.

Pennon used its WaterShare+ initiative to benefit customers ahead of regulatory mechanisms. WaterShare+ is a unique mechanism in the industry which allows financial gains to be shared with customers in a transparent way - either as bill reductions or shares in Pennon. All household customers of SWW including Bristol Water received a £13 bill reduction or were able to opt for equal value of Pennon shareholdings via WaterShare+, at a total value of £20m. This means 90,000 households are now shareholders in Pennon, representing one in 14 customers – including 1 in 30 households in the Bristol region.

Service benefits

The local brand, operational presence and strong customer voice for Bristol Water has been maintained and supported. This arrangement provides the 'best of both worlds' outcome. For example, Bristol Water customers are benefiting from the group's water quality experience, whilst the rest of the group are benefiting in improvements in leakage and customer service performance based on Bristol's leading expertise.

The independent customer panel, the WaterShare+ Customer Advisory Panel, is in place to hold the company to account on behalf of customers. A dedicated subpanel for the Bristol region has been retained as part of the full

panel, and this meets regularly to hold the company to account in delivery of its commitments and to engage on future plans.

A unique part of the WaterShare+ Customer Advisory Panel is that it holds quarterly meetings in public – including in the Bristol region. These give all customers the opportunity to directly provide their views and challenge the Executive Team on any issues of concern or interest.

Bristol Water has maintained high levels of customer satisfaction and customer service:

- The results from Bristol Water's annual customer satisfaction survey showed that 80% of respondents rated the service received as good or very good with high levels of satisfaction overall.
- Bristol Water continues to maintain high scoring and ranking performance across a number of customer service measures including C-MeX, D-MeX, UKCSI and the Bristol Water annual customer satisfaction survey.
- Bristol Water has maintained its ranking of 6th in the sector for C-MeX in following the merger. It ranked 6th in 2020-21, 2021-22 and 2022-23.
- Bristol Water has improved in the industry rankings for D-MEX moving from 9th in 2021-22 to 4th in 2023-24.
- Bristol Water was the highest ranked water company in the January 2024 UK Customer Service Satisfaction Index (UKCSI) survey[32] and ranked 2nd only to Octopus Energy for utility companies.

The focus on Bristol Water's operational performance has been retained, with a dedicated operational director and full, ringfenced operational teams. The number of directly employed operational personnel serving the Bristol region has increased by 25% post-merger. Collaboration groups are used to share best practice across the regions – for example on leakage operations and to undertake a gap analysis of Bristol's water quality improvement plans against the DWI transformation notices for SWW.

Bristol is the first region to receive the roll out of a major new IT programme known as Customer Led Intelligent Operations (CLIO). This aims to ensure that when customers contact the company, their 'journey' through corporate processes and systems will be seamless, with one integrated end to end journey. This will improve customers experience and reduce response times.

As part of PR24, Pennon has submitted plans to Ofwat for a £430m capital programme to invest in securing long term water resilience, improve water quality through a major programme of water treatment upgrade and improve the environment through investing to increase biodiversity and reduce carbon. This is over double the scale of the current programme of investment and made possible by Pennon's secure financial structure.

Overall

Customers have benefited from the merger, and there has been no detriment to regulation given the UILs agreed: Ofwat has maintained its ability to make comparisons, and the merger has proved positive for customers.

Q69. What impact, if any, does whether or not a water company is listed on the stock exchange have on their performance?

The track record of the three listed water companies suggests that, over the long term, stock market listing supports stronger cost efficiency and service performance. This is evident in Ofwat's business plan assessments, as well as in higher returns on regulated investment and consistently positive evaluations of financial resilience.

Listing attracts a broad and diverse investor base, giving companies better access to capital—critical for delivering long-term infrastructure investment and innovation. Listed companies are also subject to stringent governance and transparency requirements around financial health, operational performance, and risk. These obligations constrain excessive risk-taking and help drive robust management, better governance, and improved outcomes for customers and the environment.

These advantages are reflected in sector performance. The three listed companies have consistently demonstrated stronger cost efficiency and service delivery relative to the industry as a whole.

[32] UKCSI Utilities Sector - January 2024 ⋆ Institute of Customer Service

Listing has also enabled greater customer engagement. Through our WaterShare+ programme, we return outperformance directly to customers—either through reduced bills or shares in the company. This model, uniquely enabled by a listed structure, gives customers a real stake and voice in their water company. To date, over £40 million has been returned through WaterShare+, and we now have four times as many customer shareholders as institutional investors. A further WaterShare+ share issuance is planned for later this year.

Q70. What impact, if any, do complex company structures like Whole Business Securitisation have on water company performance?

In our experience, complex financial structures such as Whole Business Securitisation reduce flexibility, limit responsiveness to changing circumstances, and can ultimately undermine financial resilience. While securitisation may provide stable funding under certain conditions, its rigid structure has proven inappropriate for the long-term needs of the UK water sector.

Pennon has direct experience of this challenge. Over recent years, we have acquired Bournemouth Water, Bristol Water, and most recently SES Water — all of which operated with securitised financing structures. In each case, we have successfully unwound these securitisation arrangements and put in place a diversified funding portfolio, recognising that such structures constrain the flexibility required to manage financial risk and to support strategic investment decisions in a changing regulatory and environmental landscape.

Securitisation locks companies into fixed capital structures with limited ability to raise additional equity or adjust gearing levels. This restricts management's capacity to respond effectively to emerging risks, such as unexpected operational shocks, regulatory changes, or the need for accelerated investment to meet environmental or supply resilience challenges. Importantly, it can also constrain companies' ability to access diverse pools of funding, increasing dependency on debt and reducing financial headroom.

In contrast, Pennon's approach as a publicly listed company, supported by a broad and diversified investor base, enables us to maintain a balanced and flexible funding portfolio. Our long-term funding strategy does not rely on securitisation. Instead, we have demonstrated our ability to raise capital efficiently through equity markets — including a £490 million rights issue and a prior £180 million equity raise to support the acquisition of SES Water. This ability to access equity markets provides resilience and adaptability, ensuring that investment in infrastructure and service improvements is not constrained by inflexible financing arrangements.

Pennon is consistently recognised as one of the most efficient funders in the sector, with low effective interest rates achieved through a prudent and well-managed capital structure. This financial efficiency directly supports long-term investment in the assets and services that customers depend on, while maintaining affordability.

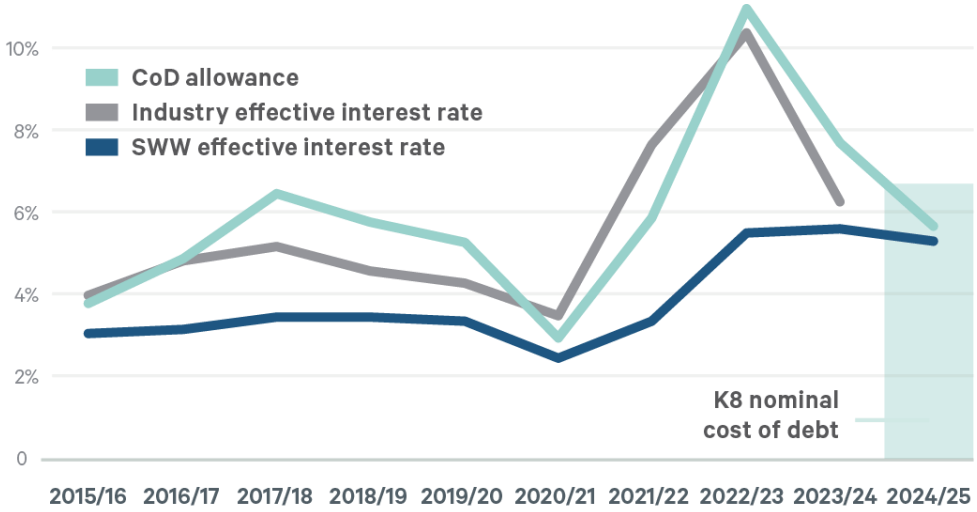


Figure 14. Cost of debt (CoD) and financial efficiency over time

We also adhere to robust governance standards as a listed company, including the publication of annual financial viability statements and maintaining prudent gearing levels, aligned with regulatory expectations. Our

transparent, investor-facing governance model ensures that our funding strategy remains aligned with the interests of both customers and investors.

Q71. What impact, if any, does the type of investor (for example, private equity firms, pension funds) have on water company performance?

Investor type has a direct impact on water company performance by shaping governance, investment horizons, financial resilience, and alignment with long-term environmental and customer outcomes. Different models of ownership bring different expectations, strategies, and risk appetites — which in turn influence the quality of decision-making and the company's ability to deliver sustainable services.

At Pennon Group, we have seen first-hand how investor alignment can strengthen performance. Having operated both water and wastewater services alongside Viridor — a growth-oriented waste and energy recovery business — we understand how different business models attract different kinds of capital. Viridor's need for long-term, higher-risk investment was distinct from the stable, utility-style financing suited to water services. This experience gives us confidence that separating water and sewerage licences would enable better matching of capital structures and investor types to the needs of each business and attract more investment into UK water through different pools of capital.

Water services, with their steady-state investment profile and ongoing operational delivery, are well suited to long-term institutional investors — such as pension funds and insurers — who prioritise stable income and ESG performance. Sewerage, by contrast, is a higher-risk, more capital-intensive profile that requires investors willing to back long-term growth, rather than short-term income. We saw this with Viridor where we had higher concentrations of infrastructure and GARP investors.

Alongside the type of investor, we believe the quality of investor engagement and accountability mechanisms also directly influence performance. Through our WaterShare+ scheme, we have embedded customer voice at the heart of our governance. Our WaterShare+ Customer Advisory Panel actively scrutinises and challenges our performance and plans, ensuring that we are held to account not just by shareholders, but by the communities we serve.

Crucially, WaterShare+ goes beyond consultation: it enables meaningful participation and is an important way in which customers, customer representatives and local stakeholders hold us to account. Customers are invited to quarterly public meetings, always attended by our CEO and executive team, where they can question leadership directly and influence priorities — including investment choices. During the cost-of-living crisis, this dialogue led us to keep bill increases significantly below inflation and double the number of customers on support tariffs, reflecting the concerns raised by our customers.

The scheme also allows customers to take a financial stake in the business, with around 90,000 customers now shareholders through WaterShare+. We aim to increase this to one in ten households in the South West by 2030 — a fundamental shift toward shared ownership and accountability.

Ownership - Wales

Q72. How effective has Dŵr Cymru Welsh Water's not-for-profit model been in driving improved outcomes?

Welsh Water has not consistently delivered sector-leading performance and the company is often mid-ranking on key metrics like pollution incidents and leakage. This supports our view that ownership structure alone does not drive outcomes. Listed businesses have internal governance AND shareholder pressure and challenge to ensure a performance focus.

Q73. What are the risks associated with Dŵr Cymru Welsh Water's not-for-profit model?

A key risk of Welsh Water's not-for-profit model is the absence of an equity buffer. Equity buffers are widely recognised as critical in the water sector, allowing companies to manage revenue shortfalls, cost shocks, or operational failure without immediately impacting customers or investment plans. Ofwat's stress testing assumes companies can raise equity or restructure if needed. Without shareholders, Welsh Water relies solely on debt and retained surpluses, which could reduce flexibility and place financial risk more directly on customers through higher bills or delayed investment.