Annual Performance Report

2022/23

Contents

About our Annual Performance Report

This is our Annual Performance Report ("APR"). It's where you can find out more about how we've performed during our 2022/23 financial year (1 April 2022 to 31 March 2023) against the targets we have agreed with our regulator, Ofwat.

These targets are tied to our purpose to deliver life's essential service, so our customers, communities and the environment can thrive.

We're here to make sure our customers have clean, fresh drinking water every day, and that we're recycling waste without our customers having to worry.

We want to help you, our customers and stakeholders, to understand what our priorities are and what we're doing to turn Thames Water around.

We know that being truly open and transparent is important as we continue to build trust with our stakeholders, so we have changed the way we communicate to tell our story in a more straightforward way.

Accessible information

To make our information accessible we've:

- Split our APR into sections for easier reference;
- Added section tabs on the left-hand side throughout this document;
- Provided an index of our individual performance commitments ("PCs") on page 20;
- Split our PCs into two sections, common and bespoke, and ordered them so they are consistent with the ordering that Ofwat uses[1];
- Provided clear commentary on how we've performed and what we're doing to improve our performance;
- Introduced graphs so that it is easier to see trends and performance against targets over time;
- Provided a look up for all our regulatory statements and disclosure on page 70;
- Provided an index of our regulatory accounts in the regulatory accounts section of this document;
- Provided a glossary of terms on our website; and
- Explained our approach to open data on page 96.

Throughout this report we will provide extra information to help you understand this report.

[1] *Ofwat's Water company performance report 2021/22*

About us

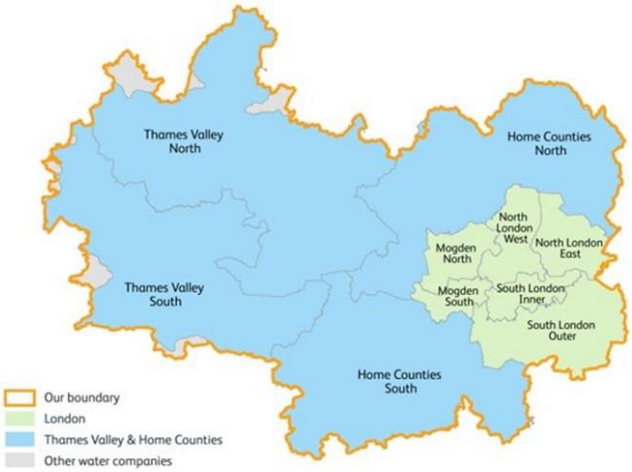
Our purpose

Our purpose is to deliver life's essential service, so our customers, communities and the environment can thrive.

Where we operate

Our operating area follows the River Thames and stretches from Gloucestershire to Essex, covering countryside, villages, towns and our capital city of London.

So that we are closer to our customers, we transformed to a regional model in April 2022 and have separate operational teams dedicated to London and Thames Valley & Home Counties.



Board leadership, transparency and governance

We're committed to robust standards of corporate governance and follow the requirements of Ofwat's board leadership, transparency and governance principles.

Further details can be found in the 'Compliance with the Corporate Governance Code' section of our annual report.

Our values

We want everyone at Thames Water to live our values:

- Take care
- Passionate about everything we do
- Be respectful and value others
- Reach higher, be better
- Take ownership
- Be proud, be blue.

Over the past year, we've been bringing them to life through our living our values sessions, helping us to reconnect with our values and behaviours and understand what collective behaviours we need to exhibit to get to where we want to be.

Key facts

- We serve 16 million customers across London and the Thames Valley
- We move more than 7 billion litres of water and wastewater through our water cycle, every single day
- Our ambassador volunteers provided support day and night, during the National Mourning for Her Majesty Queen Elizabeth II to make sure visitors to London and Windsor, including those in 'the queue', had access to drinking water through our new waterwalls
- We turn poo into power and self-generate over 20% of our own energy, with 100% renewable electricity from the grid filling the gap
- We've donated nearly £6m to our Trust Fund since 2009, making it one of the largest charitable funders of debt advice in our region.

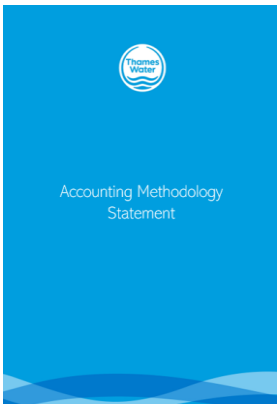
Our regulatory and statutory publications

We publish the following documents on our website.

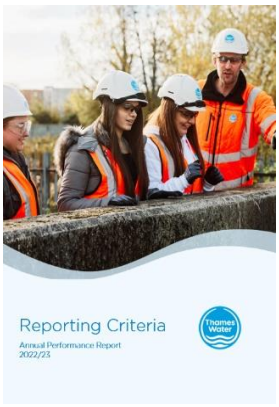
Our action plan
What we are doing to improve our performance

Annual report

Our sustainability report



Methodology statement
Processes and allocation methods used in our financial APR tables



Reporting criteria
Approach used to prepare non-financial information in our APR

Glossary of terms
Supporting our reader's understanding

We publish our APR data tables in in a MS excel format on our website where they can be accessed by all interested parties.

Statements from our CEOs and Board

Our Co-Chief Executive Officers' statement

"As we take on the leadership of this iconic business, we're focused on stepping up the delivery of our turnaround."

Cathryn Ross and Alastair Cochran
Interim Co-Chief Executive Officers, appointed June 2023

We want to start this statement by paying tribute to one of our supply chain colleagues who tragically lost his life last year, while carrying out a routine task. Safety is our top priority and 'take care' is a core Thames Water value. The incident is still being investigated to understand what happened and, more importantly, to prevent it from happening again. Our thoughts are with our colleague's family and friends at this difficult time.

Our turnaround

As we take on the leadership of this iconic business, we're focused on stepping up the delivery of our turnaround, to build on the strong foundations that have been put in place over the last two years.

Our refocussed turnaround plan is built on a robust financial position. We had £4.4 billion of liquidity at the end of the financial year end and our shareholders have continued to support the business through additional funding.

They committed £500 million of funding during the year, which was drawn in March 2023. Shareholders have now agreed to provide a further £750 million of equity funding, which will be subject to certain conditions, to drive Thames Water's turnaround over the remainder of the current AMP7 regulatory period and establish a solid foundation for Thames Water's long term growth.

In addition, our Shareholders acknowledge that the development and delivery of the new focused turnaround plan will require the provision of further equity support in AMP8 significantly in excess of the current commitment.

In addition, our shareholders acknowledge that our turnaround will continue into AMP8 and that the new refocused turnaround plan will likely require the provision of further equity investment significantly in excess of the current commitment to improve operational performance and financial

resilience. Indicatively, the AMP8 equity investment is expected to be in the region of £2.5 billion, but the nature and amount of such medium-term support will depend on finalisation of the new focused turnaround plan and the regulatory framework that will apply to the AMP 8 period. We very much appreciate shareholders' substantial investment in the business, which demonstrates their commitment to delivering Thames' turnaround and building a better future for our customers, communities and the environment.

At the same time, we fully recognise our performance is not where it needs to be. The impact of the weather on our ageing assets was acutely felt in FY23, and we weren't able to deliver key improvements quickly enough.

During the year, it became clear we needed to accelerate the speed of performance improvements and so, in April, we began a review of the turnaround plan. As a result of that review, we've refocused the plan into a more targeted, prioritised, three year turnaround, that will drive faster improvements in key performance metrics. It will also be underpinned by greater financial discipline as we seek to secure maximum value from every pound we spend for our customers and the environment.

Over the last 12 months we have made good progress in embedding the foundations of a turnaround in performance. We've moved to a restructured regional operating model, brought all customer-facing telephone teams back to our region, and insourced the repair and maintenance of our water network.

All of the structural changes are bringing us closer to customers and will deliver improvements in our performance while creating good quality local jobs. We've also continued our record levels of investment with £3.1 billion invested in our assets since the launch of the turnaround just over two years ago, £1.8 billion of which has been over the last year alone.

In the coming year we will build on these foundations by prioritising a smaller number of performance improvements. These will be backed by clear metrics, with clear accountabilities across our leadership team.

The health and safety of our colleagues and customers will always be our most important priority and we'll be focusing on other areas that matter most to customers, such as reducing pollutions to improve river health. We know we can't do everything at once and the new turnaround plan will focus on these critical areas. Clearly, prioritisation is key to ensure we can deliver improvements efficiently for our customers.

We are also managing deliverability constraints in a constrained supply chain that has been impacted by recent global events. This is requiring trade-offs to be made as we focus on delivering substantial and sustainable improvements as quickly as possible, safely and in the areas that matter most.

We've spent a lot of time over the last two years uniting around our purpose, values and behaviours. It's clear that Team Thames is full of passion to make improvements in what and how we deliver for customers and the environment, but we need to make it easier for them to do this across London, the Thames Valley and Home Counties.

To deliver the refocused turnaround plan, we're empowering teams to take more accountability to speed up improvements. We also need to break down the legacy, and unnecessary, barriers to success and encourage our senior leaders to take ownership of the decisions they're in the best place to make.

The scale of the challenge

While we are making positive steps, the scale of the challenge we face is significant and we need to ensure that we adequately reflect in our plans both the cost to deliver our services with an ageing asset base, and the investment required to improve our asset health over the long term . For years our performance has been severely affected by the health of our assets.

On a day-to-day basis our ageing assets need more maintenance to provide our core services, we spend more to fix assets that fail, and when we are hit with extreme weather, which is happening more often, our services are more adversely affected and take longer to restore. All of this feeds into our performance, and into financial penalties which in turn reduce the funds available to reinvest in the network.

We're in the concluding stages of an internal investigation into the scale of what needs to be done to improve our resilience, manage and renew our assets over the long-term. The report will be finalised in the Autumn and will enable us to factor in the costs associated with renewing our assets over the coming decades into our PR24 business plan submission.

It's absolutely vital we understand what needs to be done and put a sustainable plan in place to manage and renew our assets, as we face into the challenges of climate change and population growth.

The need for reform

In recent years we have consistently advocated for systemic reform focused on three areas, relating to planning, regulation and investment in critical infrastructure. We absolutely align with this view and will continue to drive it forward.

First, we need to stop using drinking water to flush toilets or water gardens, which will require a completely different way of planning developments. Second, we need to look outside the five-year regulatory cycle to be able to make the right long-term decisions – we all know we'll need water for more than five years, but the current regulatory model trains people in the sector to focus on the short-term. And third, we need a new coordinated approach to speed up critical projects like the Thames Tideway Tunnel, which don't fit within the regulatory framework.

The Thames Tideway Tunnel will reduce spills into the Tidal Thames by an estimated 95% in the next couple of years, putting us way ahead in our journey to clean up rivers. But it was more than fifteen years in the making and was only possible through an innovative financial model, not seen before in the industry. The proposed reservoir at Abingdon could also be delivered in a similar way.

Our first priority is to make sure we deliver our turnaround to improve customer and environmental performance. However, the country's water and waste water resilience rests on a fundamentally different way of doing things; our assets are ageing, and the dual challenges of climate change and population growth are only going to intensify.

We recognise the critical role we, the Executive team and our leadership community, needs to play in working with our regulators, peers, investors, NGOs and Government to drive radical reform. In the last few years, under Sarah Bentley's leadership, we transformed our engagement with stakeholders, spending time listening and understanding and sharing ideas. We are committed to maintaining that transparent, honest and collaborative approach. A better water future is essential for everyone. It is not something that any water company can deliver alone.

A pivotal price review

This price review is pivotal for the sector's long-term future. As we head towards the submission of our business plan for PR24, the stark reality of the situation facing the industry is clear. We absolutely need to invest to manage and renew ageing infrastructure and increase our resilience to extreme challenges that will only accelerate. Being able to balance investment with deliverability and affordability is at the heart of our business plan for the next five years.

A challenging year for performance

With our ageing assets and extreme weather events being major contributing factors, our performance fell short of expectations during the year, in key metrics including leakage and pollutions.

Our job is to deliver a good service, regardless of the weather. So the fact that 2022 was a year of climate extremes is no excuse for poor performance. Nevertheless, the drought in the Summer followed by the freeze-thaw in December put major stress on our network and the resilience of our operational teams. We'd been performing well in reducing leakage in the early part of 2022/23, however our performance was knocked off course by the extreme drought. It led to a 38% increase in mains bursts due to the excessively dry ground and increased pressure in pipes due to spikes in demand.

The pipes faced more stress in December when the persistent freezing weather, followed by a quick thaw, led to cracks in pipes. Customers also felt the devastating impact on pipes in their own homes too. As well as leakage, the weather extremes had a negative impact on our performance in supply interruptions, consumption and pollutions. On the flip side, the exceptionally dry weather helped us secure a significant 46% reduction in discharges of untreated sewage and improved performance in internal sewer flooding.

While we haven't met targets in some of our core metrics, we've continued to make good progress in the reduction of complaints with a 28% year-on-year reduction. Our capital delivery machine is also streets ahead of where it was. There's been a six-fold increase in the work the team has on contract in the last two years – a brilliant achievement while the supply chain still recovers from the impact of covid-19.

A step forward in transparency

We care deeply about the health of our rivers and cleaning up rivers is at the heart of our approach – we've been clear for years that all discharges into rivers are unacceptable, whether they're a result of a fault in our network or the design of our infrastructure.

The weather helped us secure a huge reduction in sewage spills last year, with the exceptionally dry weather in the summer, and we won't be complacent.

Being transparent about what's happening is key to rebuilding trust and we're leading the way. We were the first in the industry to launch our live sewage discharges map in January 2023 and since then we've enhanced it with details of the investment we're making at many of our sites.

While it is clear that it is unacceptable, it is also clear that there is no quick fix to stopping sewage discharge. We need to fundamentally adapt and enhance the design of infrastructure that often more than a century old. We need to stop rainwater, and water from misconnections, getting into our vast network and overwhelming our sewage treatment works. We also need to work with property owners, developers and local authorities to ensure that we change our approach to drainage, so we don't store up further problems, including in relation to surface water flooding, elsewhere.

Supporting our customers with the cost-of-living

We increased our social tariff support to £50 million during a difficult year for many of our customers, as well as continuing to provide other support through our customer assistance fund and independent trust fund. We've also pledged to help customers with almost a quarter of a billion pounds through our social tariffs over the next two years.

A year of unprecedented business change

At the same time as facing various external challenges, the last year saw us embedding some fundamental changes within our business. We're incredibly thankful to our colleagues across the business for all of their hard work and resilience not only in keeping the taps flowing and the toilets flushing, but also for their openness and enthusiasm in adapting to new ways of doing things.

Throughout the year, Team Thames demonstrated real commitment to delivering improvements for the customers and environment. The scale of internal change and external challenge has meant that it not been easy for the team, and we continue to focus on supporting our colleagues through

this period. Sarah spent a lot of time during the year meeting colleagues at sites across our patch to listen to the challenges they face and support them in finding solutions.

As an Executive team, we'll continue that programme and remain committed to spending time with, listening to and supporting our frontline colleagues.

Thank you

We'd like to finish this statement with a thank you to Ian Marchant, our Chairman, who is stepping down after six years at Thames Water. Two of those years were spent as Interim Executive Chairman, during which he provided stability and direction for Team Thames. Ian will be warmly remembered across the business for his energy and enthusiasm, and the breadth of perspective he offered across such a wide range of issues.

We'd also like to thank Sarah Bentley, until recently our CEO, who worked with such determination and passion to get this business back on track. After putting strong foundations in place, Sarah felt it was the right time to step away and allow a new CEO to take the reins as we enter the next phase of our turnaround journey. We are clear that we want to build on what Sarah achieved, including the way she transformed our engagement with colleagues and our relationships with stakeholders.

We wish them both the best in their next endeavours.

Thank you,

Cathryn Ross and Alastair Cochran
Interim Co-Chief Executive Officers

A statement from our Board

"It's clear there needs to be urgent reform of the sector, so it can deliver its regulatory, customer and environmental commitments, and the risks need to be at the top of the regulatory and political agenda."

Ian Marchant
Chairman

2022 was a real manifestation of the heightening risk of climate change and the vulnerability of Thames Water's ageing network. It's clear that the world of water will need to operate very differently over the next 30 years, adding complexity to the delivery of short- term targets while also creating the need to develop long-term plans for our changing world.

Thames Water has been through an intense period of change to lay the foundations of the turnaround, and, on behalf of the Board, I would like to thank Team Thames for their continued passion, determination and commitment to do their best for customers and the environment. Despite the challenges facing Thames, every single day the team supplies high quality drinking water to 10 million customers and treats the wastewater of 16 million across London and the Thames Valley. The scale of what the team does every day is something to be proud of.

As a Board, we're focused on supporting the Executive team in delivering strong foundations for the team to succeed and to deliver our purpose – to deliver life's essential service, so our customers, communities and the environment can thrive.

Strong, ongoing shareholder support

The Board has spent time considering our financial resilience and we're in a solid position. Regulatory gearing is down to 77.4%, compared to 81.3% five years ago, and, at 31st March 2023, we had £4.4 billion of cash and committed facilities available.

The challenge we face is that we need to fund significant investment over the next seven years to increase the resilience of our assets, to meet current and future environmental obligations and to improve the performance of the business for our customers and the environment.

Our shareholders have been very supportive of the Board and Executive team and have already demonstrated that support in two ways; foregoing any income on their investment for the sixth year in a row and, as agreed in June 2022, investing an additional £500 million.

Shareholders have now agreed to provide a further £750 million of funding by 2025, subject to satisfaction of certain conditions, to support the development and delivery of the new refocused turnaround plan, and have acknowledged that our turnaround will continue into AMP8 and that the new refocused turnaround plan will likely require the provision of further equity support investment significantly in excess of the current commitment to improve operational performance and financial resilience. Indicatively, the AMP8 (2025-2030) equity

investment is expected to be in the region of £2.5 billion, but the nature and amount of such medium-term support will depend on finalisation of the new focused turnaround plan and the regulatory framework that will apply to the AMP 8 period.

The Executive team and the Board are continuing to engage in constructive discussions with shareholders and regulators to ensure the expected investment is forthcoming.

The ageing network

Performance during the year was affected by a number of large asset failures on Thames' ageing network, including a burst on a 100-year-old, 42-inch water main in Belsize Park. The declining health of Thames Water's ageing infrastructure is increasingly evident, with the impact of climate change and population growth adding more pressure on the already stretched network. With that in mind, we welcome the Executive team's leadership in getting a deeper understanding of the investment we need to make to increase the resilience of our network.

With the business assessing the investment required over the long-term to renew and maintain our assets, I, and other members of the Board worked with Engineering and Asset Director, Caroline Sheridan and her team to review asset management data and understand the critical areas of risk.

Despite improvements being made to the way we operate as part of the turnaround, asset failures have such a significant impact on our customers, our performance measures and the team's resilience that it can be difficult to highlight the progress that is being made behind the scenes. There are no quick fixes to the challenges the business faces. However, as a Board, we have confidence in the team to turn around this business and are fully engaged in supporting them in this essential work.

Climate risk

The sudden and severe drought during the summer created real problems for the network and, as a Board, we spent a lot of time with teams across the breadth of Thames to understand the impact of the extreme weather and the mitigation measures in place. Despite the severity of the drought and the impact on our water operations, Team Thames continued to make sure customers across the region had access to the water they needed for life's essentials. During the year, we were provided updates by the newly formed Climate Change Working Group, which reports to the Health Safety and Environment Committee and is led by Caroline Sheridan. The group was set up to increase the business' oversight of climate risk and opportunity, as well as reporting requirements, including alignment with the Taskforce for Climate Related Financial Disclosures. You can find the TCFD report in our Annual Report. Given it has continued to be a year of significant external challenge, the Board's Audit, Risk and Reporting Committee has spent a lot of time discussing the principal risks. Each principal risk has now been given a Board sponsor, as well as the Executive lead, to increase focus and governance of risk management and support the business in mitigating the biggest risks to the delivery of life's essential service.

Long-term planning

Ian Pearson and I have been members of the Water Resources Management Plan subcommittee over the past year. We've spent time with the teams working on the long-term plan for water resources and have also provided guidance on the Drainage and Wastewater Management Plan, as the business prepares for the heightening pressures.

Board engagement

Making sure team Thames has the resilience to keep delivering the essential services, at the same time as adapting to a changing Thames Water, is a key focus for the Board and Executive Team. To maintain a good understanding of the challenges facing the front line, Ian Pearson, our Workforce Engagement Lead continued to run an extensive programme of Board

engagement during the year. He led 19 site visits, as well as a range of virtual sessions, with other members of the Board also joining him at a number of sessions.

In June 2022, I, with members of the Board, visited the River Chess, to see the smarter water catchment plan in action. One of three plans for this regulatory period, the River Chess Smarter Water Catchment Plan brings together partners in the river community to take joint action to improve river water quality, focused on the strength of partnership and nature-based solutions. It was great to meet some of the stakeholders who are working together with teams at Thames Water to make a real difference to the beautiful chalk stream.

Changes to the Board

We've appointed John Holland-Kaye, Chief Executive of Heathrow, to the Board as a Non-Executive Director to represent USS. David Waboso, an Independent Non-Executive Director, stood down.

Despite the Board changes, the Independent Non-Executive Directors remain the single largest group on the Board, in alignment with strong governance. Full details of the Board can be found in the Annual Report.

On 27 June 2023, Sarah Bentley stepped down as CEO and from the Board. The process has begun to recruit her replacement and, in the meantime, Alastair Cochran, our Chief Financial Officer, and Cathryn Ross, our Strategy and External Affairs Director, are interim co-CEOs

Stepping down from the Board

After six years as Chairman of Thames Water, including two years as Interim Executive Chairman, I've decided to step down this Summer. On 29 June 2023, it was announced that Sir Adrian Montague would become Chair of Thames Water Utilities Limited from 10 July 2023. The challenges facing the water industry, and Thames Water in particular, are increasing all the time, whether it's the current and future implications of climate change, the impact of the health of our ageing assets or the increasing focus on us. The task of transforming this business will be extensive and challenging and will take longer than any of us would want. However, we have built strong foundations to deliver a turnaround and put a good team in place to do this.

I wish everyone involved with Thames Water all the best as the turnaround journey continues.

Ian Marchant
Chairman

Our 2022/23 Performance

Our performance in 2022/23 was affected by climatic events

The impact of climatic events on our performance is a common theme running through our commentary.

This is despite a backdrop of significantly increased recent investment and being two years into a turnaround plan designed to produce sustainable improvements.

This year the weather adversely affected on our performance against the following PCs:

- Abstraction incentive mechanism
- C-MeX
- Internal sewer flooding
- Leakage
- Mains repairs
- Per capita consumption
- Pollution incidents
- Responding to major trunk mains bursts
- Security of supply index
- Sewage pumping station availability
- Water quality events
- Water supply interruptions.

Our climate strategy

At Thames Water, adapting to and mitigating our contribution to climate change have been important parts of how we do business for a long time.

We're continuing to improve the way climate risk becomes an inherent part of our strategy and business planning.

We have made significant assessments to understand climate related risks and opportunities, and their impact on our future plans.

How weather impacted our performance this year

The period 2022/23 was dramatic for the UK's climate. In summary:

Summer drought (declared August 2022)

Last summer was the joint hottest on record (with 2018) and the increased demand for water by our customers meant that we had to pump more water through our pipes, at higher rates, to meet demand. This put additional pressure on our ageing network and caused an increase in the number of leaks.

The drought also created unprecedented 'soil moisture deficit', with ground drying out. As much of the ground in our region is clay, which hardens when it dries out, our pipes had less flexibility to move. Driving vehicles on this solid ground made the problem worse.

This caused a significant increase in visible leaks that needed fixing in both our pipes and customers' pipes.

The drought also impacted on our pollution incidents as the lower flows in rivers resulted in discharges having a greater impact than they would have otherwise.

August storms

In August, the Met Office issued yellow warnings for storms, travel disruption, power cuts, lightning, heavy rain and flash flooding.

Given the lack of green space and densely populated areas in London, in some areas, the rain overwhelmed our surface water and sewage combined sewers, resulting in 600% more hydraulic floods than our target for the period.

Following this heavy rainfall, the incoming flow was greater than our sewage treatment works ("STW") could treat, therefore the excess was screened and passed to storm tanks for storage (with a view that it would be returned to the head of the works for treatment when the STW had capacity).

However, our storm tanks became full before the rain stopped, meaning that excess flow had to be discharged into rivers (as overflowing sewage heavily diluted with rainwater).

Due to the size of our sewer network, this is not a straightforward problem to deal with. As an example, Witney STW, which serves a population of about 45,000 people, receives sewage from a network of more than 200 miles of sewers. We're working on detailed plans for reducing these inflows and will be making a case for the necessary investment in our next business plan.

We published our River Health Report in April 2023. If you click on the image, you will find more details on the steps we are taking to improve river quality.

Wet autumn

The autumn of 2022 was wetter than average. November was a particularly wet month, with some areas in our region having double the average rainfall.

The re-wetting of the ground caused further movement and more leaks, as well as increasing hydraulic floods by 140% over target.

Winter freeze/thaw

In December, we experienced one of the most significant cold spells since 2010.

The prolonged cold spell before Christmas ended with a rapid thaw which caused a surge of leaks as the pipes were affected by the sudden change in temperature (a variance of 17° C in one day between 17 and 18 December 2022).

As a result, our mains repair volume in December was 46% greater than at any equivalent time in the last ten years. However, having learned lessons from the 'Beast from the East' weather event, our customers experienced less than 10% of the supply interruptions seen in 2018.

Early part of 2023

This was followed by a period of intense rain in January, which saw some areas having roughly half their average rainfall for the month in the first two weeks, causing a significant increase in pollution incidents due to power outages.

We operate in one of the most densely populated parts of the UK and our infrastructure sometimes struggles to cope with the volume of sewage that is put into it, particularly during periods of heavy rainfall.

Our performance was further impacted the following month when England had its eighth driest February since earliest records began in 1836, and its driest since 1993.

How this compared with 2021/22

In 2021/22 we were affected by different, but equally significant, climatic events. The

speed and severity of the rainfall which fell during the two storms London in July 2021 was the main cause of sewer flooding. These events overwhelmed the current design capacity of the below ground systems.

We estimate that these events alone added an additional £20m to our 2021/22 Outcome Delivery Incentive ("ODI") position as declared in our Annual Performance Report last year.

It is pertinent that the Environment Agency ("EA") has chosen to exclude the impact of Storm Eunice (in February 2022) from our pollution's incidents performance metric for this reporting period.

Conditional allowances

For AMP7, Ofwat conditionally permitted us a £300m allowance to enhance the performance of our London water network.

The allowance was provisional on us delivering an agreed scope of work through a gated process, and on a substantial contribution from shareholders to the cost of the improvement works.

In November 2022, Ofwat confirmed we'd met the requirements and we committed a significant shareholder investment of £400m that will benefit customers across the region through investment in water supply.

This funding boost will allow us to replace 112km of our leakiest water mains pipes across London.

To reflect how this will impact on our performance, our performance targets for mains repairs and leakage for the last two years of the AMP have been updated as follows:

Year		Mains repairs[2]	Leakage[3]
23/24	Was	254.8	17.4%
	Now	254.7	17.4%
24/25	Was	251.1	20.4%
	Now	249.3	20.5%

With Ofwat's approval, we've also agreed to three new performance commitments for the 2020-2025 price control period.

These are:

- Trunk mains renewal (in period penalty 2023/24 onwards)
- Future London strategy (in period reputational 2024/25 only)
- London data validation work streams (in period reputational 2023/24 onwards).

We are also progressing our Water Supply System Resilience Programme ("WSSRP) conditional allowance which we intend to submit to Ofwat in July 2023. If approved, the WSSRP conditional allowance will deliver major asset resilience improvements to some of our key assets at Coppermills and Hampton Water Treatment Works.

Thames Tideway Tunnel

We have six Thames Tideway Tunnel ("TTT") performance commitments. The tunnel is being constructed by Bazalgette Tunnel Limited to tackle the problem of overflows from the capital's Victorian sewers for at least the next 100 years.

We're responsible for the connection works to our existing network.

[2] *Per 1,000 kms of mains*

[3] *Three year average reduction*

About our performance targets

What we're measured against

We measure our performance against a set of targets we agreed with Ofwat as part of our Asset Management Plan ("AMP"). The water industry works in five-year regulatory periods, otherwise known as an AMP period. AMP7 covers the period from 1 April 2020 to 31 March 2025.

For AMP7, we have 55 (2021/22: 52) PCs:

- 15 Ofwat defined "common" PCs where our performance is benchmarked against other companies
- 37 "bespoke" PCs that we designed to help us focus on our key customer priorities
- 3 "bespoke" PCs relating to our conditional allowances

What happens if we fail to meet our targets

If we perform better than the targets that we have been set, we can earn a financial reward. When we fail to meet a target, we incur a financial penalty.

Both penalties and rewards will adjust how much customer revenue we can collect for our water, wastewater and retail services.

Some PCs can incur both rewards and penalties while others are reward or penalty only.

These are also known as outcome delivery incentives ("ODI") and the amount we pay or receive depends on how far we've missed or exceeded the target for an individual financial performance commitment, and specific calculation rules set by Ofwat.

Our ODIs are calculated in a number of different ways. Some calculations reflect how we performed within the regulatory year, some our performance in a calendar year, while others are based on our performance across the AMP.

Not all our PCs have a financial reward or penalty attached to them. Some are reputational only to recognise the impact our performance can have on the reputation of the company.

We know that our operational performance is unacceptable, and we are committed to improving it. We published our action plan to improve performance on our website in April 2023.

On the following pages, we explain how we've performed against each PC target and, where a target has not been met, what we're doing to improve our performance.

How we performed against our targets in 2022/23

Performance	Met			Not met			Total target	No target	Total number
PC Type	20/21	21/22	22/23	20/21	21/22	22/23	22/23	22/23	22/23
Common	5	7	4	8	6	9	13	2[4]	15
Bespoke	21	22	22	13	12	12	34	3	37
Additional PCs[5]	-	-	-	-	-	-	-	3	3
Total	26	29	26	21	18	21	47	8	55

Rewards/(Penalties) (in £m)[6]	20/21	21/22	22/23
Water quality compliance	-0.898	-1.262	-16.043
Water quality events	-	-	-0.142
Leakage	2.671	-	-8.908
Water supply interruptions	-10.120	-6.956	-20.022
Mains repairs	-1.058	8.714	-16.674
Pollution incidents	-2.739	-1.433	-9.345
Sewer flooding[7]	-10.560	-28.831	-5.531
Unregistered household properties	-0.211	-0.211	-0.211
Empty household properties	-0.308	-	0.231
Clearance of blockages	-5.223	-6.410	-8.811
Renewable energy produced	-1.370	0.725	2.096
Treatment works compliance	-	-0.123	-
Environmental measures delivered	-	-0.667	-
Security of Supply (SoSI)	-	-	-0.224
Sewer collapses	-	-	0.340
Reducing risk of lead	0.015	0.429	0.689
Empty business properties	0.549	0.497	0.278
Total net penalties	-29.252	-35.528	-82.277

While not ODIs, in 2022/23 we also received penalties of £13.121m for C-MeX and £5.680m D-MeX. (2021/22: total £18m)

[4] C-MeX and D-MeX measures the relative performance of companies. They are common PCs.
[5] For 2022/23 onwards relating to our conditional allowances).
[6] All rewards and penalties are stated at 2017/18 prices.
[7] Our 2021/22 penalty Includes the impact of the London flooding of July 2021, a 1 in 200-year weather event. If this was excluded our penalty would be c.£20m less.

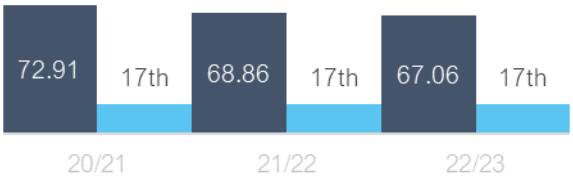
Alphabetical index of our performance commitments

Common performance commitments

C-MeX *ARO1*

Penalty: £13.121m

Customer experience and satisfaction out of 100 through a customer survey [8]



How we've done

Our ability to drive customer satisfaction this year has been affected by:

- General concerns about water companies environmental performance
- Our planned phasing out of our outsourcing partners.

We expect to see some further deterioration in our C-MeX score as we're now publishing live storm discharge and event duration data on our website.

As the only water company publishing this information, we have been recognised as industry leading by CCW and praised by external stakeholder groups as a step change in transparency over this topic.

How climatic conditions impacted our performance

Unprecedented weather extremes in the year have resulted in a range of operational issues (e.g. increased bursts and pollution incidents) that have adversely impacted on customer perception.

We have also seen negative media sentiment regarding the temporary usage ban ("hose pipe ban"), in position from August to November 2023.

What we're doing to improve our performance

In 2024, we will migrate to new outsource partners for digital customer contact, back-office services, document handling and post services.

We will focus on improving basic customer service in operations, driving improvements across no water, visible leak, blockage, and sewer flooding. Our PR24 planning has customer focused objectives, including (but not limited to) an increase in first time issue resolution, improvements to case management of customers more proactive communication, and a drive to enable customer excellence through an engaged workforce.

We confirm that we comply with the C-MeX reporting requirements with regard to the provision of at least five channels (including three online) for customers to contact us.

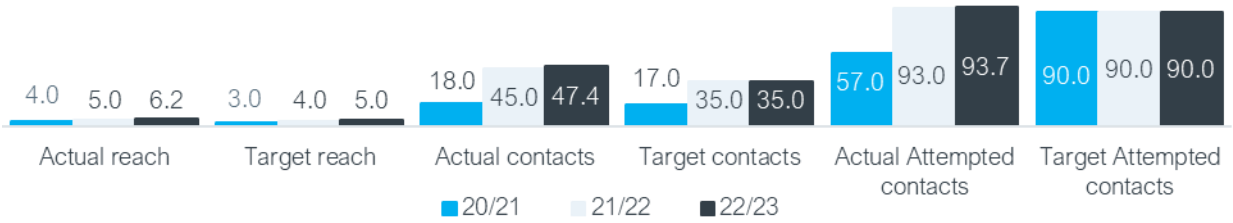
Reducing complaints isn't a PC but, as it contributes to our C-MeX score, we provide more information in the "About customer complaints" section later in this document.

[8] *The 17 largest water companies in the industry take part in two equally weighted monthly customer surveys (customer experience and customer satisfaction). The results are used to calculate rewards or penalties based on the relative performance of the company.*

Priority services *AR06*

Reputational only

% of customers on our priority service register[9]



How we've done

We've met our target this year.

We continue to grow our Priority Service Register ("PSR") through targeted email and social media campaigns, our work with third sector partners, data sharing partnerships, our proactive over 80s campaign and enhanced identification processes in our contact centres.

We've also introduced a digital tool to improve the profiling of our check in process, so that we make sure that attempted contacts are made while avoiding peak demand periods such as annual billing.

What we're doing to improve our performance

We'll continue our efforts to undertake data sharing with partners and increase our reach.

We'll look to assess opportunities to increase our actual contact response rate above the required minimum target and revise our policy for the appropriate action for customers where no contact has been received within 6 years. This will support us in holding accurate data and providing customers with the right level of support.

Individuals registered by service type:

Service[10]	Number
Communication	39,830
Support with mobility and access restrictions	308,748
Support with supply interruption	344,534
Support with security	10,688
Support with other needs	47,500
Total individuals registered[11]	365,774

Register movements in year:

	Individuals	Households
At Mar 2022	291,135	284,379
Additions	105,430	104,953
Removals	(30,791)	(30,433)
At Mar 2023	365,774	358,899

[9] This is the % of all households in our region that are on the PSR, known as 'Reach', and our how often we contact them.

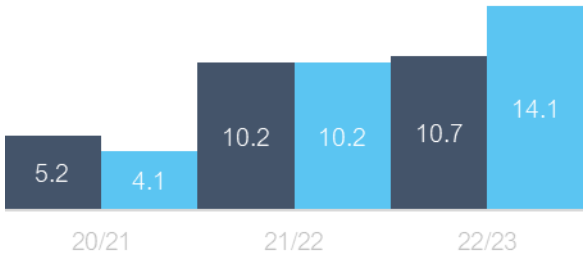
[10] The restriction of water usage in the summer 2022 drought resulted in a review of certain PSR needs codes and drove an additional 10,000 PSR registrations.

[11] An individual may be registered for more than one service.

Leakage *BW04*

Penalty: £8.908m

% reduction in leakage using a 3-year average from the 2019/20 baseline [12]



How we've done

We've missed our target this year.

This is in spite of us meeting our leakage targets [13] for both 2020/21 and 2021/22.

Our three-year average actual for 2022/23 was 602.2 Ml/d representing a 10.7% reduction against the AR20 baseline of 674.4 Ml/d, as restated in AR22 reporting.

Our annual average leakage was 619.7 Ml/d against the target of 550.9 Ml/d.

We remain committed to our end of AMP 20.5%[14] reduction target but know that we have a lot to do to improve our performance.

In response to the summer drought, we immediately enacted a substantial and ambitious Leakage Recovery Plan ("LRP") With the initial focus to develop an end-to-end plan to reduce and repair the leakage outbreak, we:

- Enhanced and improved upon our Director-led, daily, weekly, bi-weekly cadence of meetings with executive sponsors and independent reviewers
- The Thames Water Board approved funding of £65m, above our initial IBP to support the delivery of the LRP
- Increased repair and maintenance team capacity to 240 teams (480 people), supported by 100 additional enabling, logistics and support resources
- Took learning from the Beast from the East to support our customers in how they can identify, report and repair leaks on their pipes
- Extended our working patterns and adjusted elements within our policies, such as our Customer Side Leakage ("CSL") self-fix parameters, to find and fix leaks more quickly
- Built a plan to manage the potential impact of a more severe winter
- Introduced an experienced Leakage Recovery Programme Manager in November 2022 to support the end-to-end drive on performance
- Adjusted our ways of working across our end-to-end find and fix business (leakage detection, planning and scheduling, and repair & maintenance) to create local ownership, fostering collaboration and control.

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[12] As part of our LRIIP, we continue to look for data quality and reporting methodology improvements. It is likely that we will recalculate both our baseline and leakage outturn next year as we seek to provide the most accurate and complete view of our leakage performance.

[13] All leakage numbers are quoted post maximum likelihood estimation (MLE)

[14] Increased from 20.4% as part of Ofwat's approval of our PR19 conditional allowance to enhance the performance of our London water network in February 2023.

In 2022/23, we fixed 66,896 leaks (compared with 61,671 in 2021/22). This equates to one leak being fixed almost every 7 mins 45 seconds

The higher leakage levels this year are despite having significantly increased output of detection and repair of leaks.

Compared to 2021/22, we repaired 9% more leaks and repairs on our burst mains increased by 54%.

We prioritised our work based on the leaks that matter the most to our customers. This resulted in repairing 36% more visible leaks, which meant we saved more water as these leaks tend to be bigger.

In April 2023, a new Head of Leakage joined the business to oversee all elements of leakage reduction as well as our long-term reduction strategy.

How climatic conditions impacted our performance

At the beginning of July we were broadly tracking in line with our Year 3 trajectory. However, the hot summer, with record high daily temperatures and prolonged dry weather, meant we had to run many of our water supply sites and pumps at full capacity to accommodate the large increases in customer demand.

The prolonged dry weather caused the ground to move as it dried out, which placed stresses on our buried pipes, leading to an increase in breaks and leakage.

During December, our leakage performance was further impacted by the substantial freeze-thaw event when minimum temperatures moved rapidly from a prolonged period of below freezing to 10.9 degrees in air temperature.

What we're doing to improve our performance

We've set ambitious targets to recover our performance, including more leakage-focused repair teams on the ground and the installation of more smart meters to improve our understanding of consumption.

Our recently launched Leakage Transformation Programme ("LTP") sets out to improve our ability to tackle leakage and bring our performance back on track.

The programme has been structured under three key themes:

- Fix the right leaks, faster – new tools to make better use of data to allow us to prioritise leaks and reduce repair times. We'll improve our ways of working to boost local ownership; and implement systems and processes to help detect more leaks through educational and awareness campaigns
- Understand leakage and consumption – install more meters in large buildings, such as blocks of flats to improve our understanding of consumption across different property types, and we'll install smart meters in areas where there is a high demand for water
- Build sustainable foundations – changing our ways of working to deliver sustained leakage management and to set us up for long term success. A new leakage operating model will result in coordinated decision-making, improved awareness across our network, and will focus on delivering improvements in the most effective and efficient way possible.

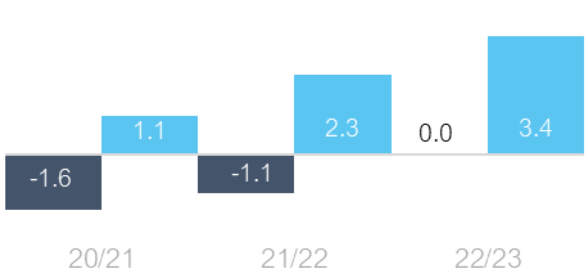
Learn more about our leakage commitment here.

Per Capita Consumption

BW05

Penalty: n/a

Three year average % reduction in the average water usage of household customers



How we've done

We've missed our target this year.

This is a PC where our performance is assessed at the end of AMP.

Our three-year rolling average[15] Per Capita Consumption ("PCC") performance for 2022/23 is 146.0 Ml/d. Whilst we have not met the target, we have seen a slight reduction in our consumption levels.

Our in-year actual PCC is now much closer to the WRMP forecast than previously.

We believe that some of the reduction in usage is due to the cost of living crisis, as people reduce their hot water consumption to reduce energy bills.

We also implemented a Temporary Use Ban ("TUB") in August 2022 and media coverage of the drought encouraged a further reduction in customer usage.

We continue to experience post-COVID hybrid working changes in the balance of household versus business water use.

Whilst we increase smart meter penetration and increase our targeted water efficiency engagement, most factors impacting consumption are external and outside of water company control or direct influence.

How climatic conditions impacted our performance

We experienced unprecedented peaks in water demand across the summer.

What we're doing to improve our performance

We'll continue to roll out our smart metering programme, which will positively influence customer behaviours and reduce consumption.

The smart meter data we collect will be analysed to proactively engage with households and businesses to drive water efficiencies, reducing both their bills and resource consumption.

Our water efficiency campaigns

We've introduced a sector-leading environmental incentive for developers, offering financial incentives to increase the water efficient performance of fittings and appliances in new homes. It also enables greater take-up of water reuse technologies (rainwater harvesting and greywater recycling) and offers a route to achieving water neutrality for any new residential development in our supply area.

Before and during the summer, we will increase our water saving messages across our channels (using emails and text messaging) to help customers know how to save water.

We're implementing an 'always-on' customer campaign across all media channels to highlight our water resource status and water efficiency benefits.

We'll also develop regular and proactive direct customer engagement through an enhanced digital platform.

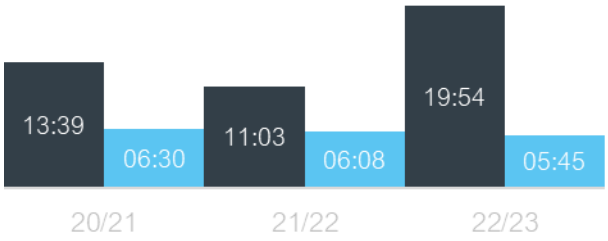
[15] *2020/21,2021/22, 2022/23*

Water supply interruptions

BW03

Penalty: £20.022m

Length of time our customers don't have water[16] (in mm:ss)



How we've done

We've missed our target this year.

Our 2022/23 performance has been impacted by five significant events, in order of significance:

- 05:49 Oxford Event (October 22)
- 02:06 Belsize Road, NW6 (December 22)
- 01:44 Netley Mill WTW (August 22)
- 00:54 Ladymead WTW (November 22)
- 00:44 New Mill Lane, OX29 (July 22).

Excluding these events, our overall outturn is much closer to our target at 08:38.

How climatic conditions impacted our performance

Whilst our underlying performance is improving, the asset health of our network is fragile, and the dramatic range of temperatures experienced in the year caused a series of exceptional operational incidents.

What we're doing to improve our performance

We're investing £12m on water production resilience, focusing on power resilience, critical spares, and resourcing.

We will minimise the impact of operational incidents by creating a full-time incident management team and by making sure that we have 24/7 capacity to deliver bottled water to our most vulnerable customers.

We plan to make more use of tankers to bring customer back in supply.

We're analysing data from our pressure loggers to understand impacts during supply interruptions.

Review of prior years' reporting

This year, the line definition for this PC has been updated to clarify that companies should report interruptions that are greater than or equal to three hours duration.

We've reviewed our prior year reporting and have not identified a need to restate prior years' performance.

We also confirm that our reporting excludes any supply interruptions to cattle troughs as required by Ofwat.

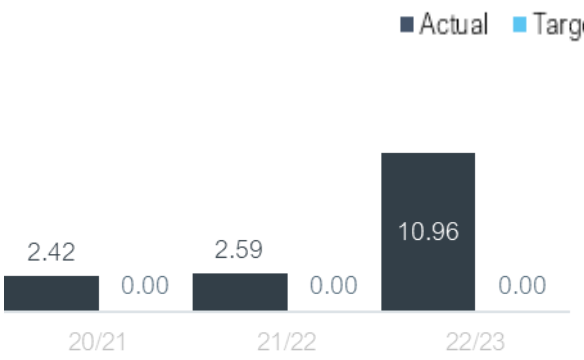
[16] *This is the average number of minutes our customers don't have water, for interruptions lasting three hours or more.*

Water quality compliance

BW06a

Penalty: £16.043m

Measured with the Compliance Risk Index ("CRI"), the annual aggregated score of our level of treated water compliance incidents[17]



How we've done

We've missed our target this year.

This is a calendar year measure.

Our CRI performance this year has been affected by four microbiological incidents caused by ingress into the contact tank at:

- Coppermills WTW (February 2022)
- Hampton WTW (September 2022 – three incidents).

These incidents alone contributed 8.87 to our overall figure.

The size of these sites means that any incidents have a much greater impact on overall performance than an equivalent incident at a Thames Valley site.

These incidents have been assessed as being unlikely to impact on public health.

What we're doing to improve our performance

Key operational initiatives include the 'coliform zero' and 'turbidity zero' improvement plans, which focus on reducing risk at the large London process plants and focus on ingress.

In 2022/23 we took immediate action to cover our contact tanks at both Hampton and Coppermills WTWs to address the risk of ingress whilst major capital improvement schemes are on schedule for completion in 2023/24.

In addition, our investment programme aims to maintain or improve our assets' health. For example, in 2023/24, we will roll out 'fix it' plans identifying and addressing water quality risks across six sites (Fobney, Netley, Kempton, Coppermills, Ashford & Hampton).

We will also continue to develop our training and competency and make sure that we have clear and up to date procedures and documentation.

When an incident occurs, the cause is investigated and assigned a score between 0 and 5. The individual failures are aggregated into an annual score.

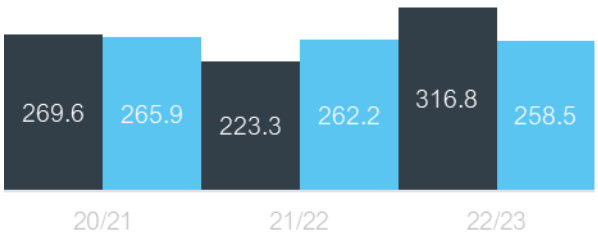
[17] *This measure aligns with the current risk-based approach used by the DWI.*

Mains Repairs

BW01

Penalty: £16.674m

Number of repairs we have made to the network per 1,000 kms of mains[18]



How we've done

We've missed our target this year.

Mains repairs have significantly increased from last year, which means we are doing more work than anticipated.

How climatic conditions impacted our performance

Last summer's drought created an unprecedented 'soil moisture deficit', with ground drying out, which contributed to a significant increase in visible leaks requiring burst repairs.

The wet autumn and December freeze/thaw that followed meant further ground movement and an increase in the number of bursts on our network.

For example, our mains repair volume in December was 46% greater than at any equivalent time in the last ten years.

The drought also meant that we saw an increase in demand and had to pump more water through our pipes at higher rates, causing more leaks.

What we're doing to improve our performance

We initiated our leakage recovery plan in late summer, significantly increasing the leakage detection activity and mains repairs undertaken to control overall leakage.

Over the next three years, we will spend close to £200m replacing water mains most prone to bursting.

Our calm systems programme enables us to prioritise our mains replacement using data on burst frequency, supply interruption hotspots and leakage sensitive areas.

We're investing in more surge loggers to proactively identify and address potential bursts.

We're still developing our 2023/24 mains repair strategy, but it will build on the ongoing mains rehabilitation and our response to this year's challenging conditions.

The more repairs we make, the worse we perform against this target. However, we will always prioritise customer needs.

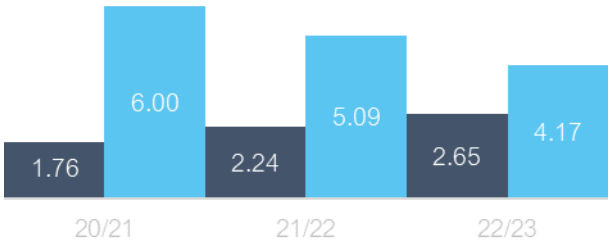
[18] Our targets have been amended for 2023/24 and 2024/25 as part of Ofwat's approval of our PR19 conditional allowances to enhance the performance of our London water network in February 2023.

Unplanned outages

BW02

Reward: £0m

% of water we were unable to supply due to unforeseen circumstances[19]



How we've done

We've met our target this year.

This is our third year of outperformance against this target.

Our outperformance reflects prompt operational responses to events.

The drinking water quality driven enhanced inspection programme and refurbishment of treated water structures, enhanced hazard review assessments and public health plan have a synergistic benefit on unplanned outage.

What we're doing to improve our performance

While we concentrate on all unplanned outages, we are particularly focused on the reliability and resilience of our five London works as they contribute over 60% weighting to this measure, and they are critical to our continued outperformance.

We are operationally focused on achieving longer-term improvements through asset criticality assessments, regular site trip reporting and response review, and a tool to assist with alarm management.

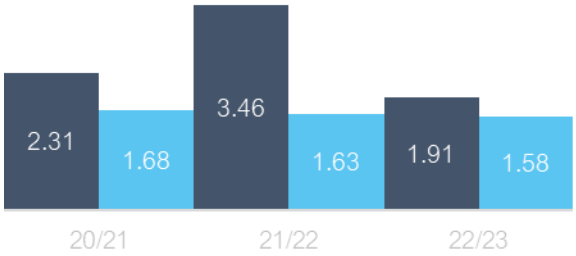
These improve our operational response to asset events to manage the system and keep customers in supply.

[19] *This is water we were unable to supply to our customers because of an unforeseen deterioration or failure of the assets we use to source and treat the water.*

Internal sewer flooding *CS03*

Penalty: £5.531m

Number of internal sewer flooding incidents per 10,000 sewer connections



How we've done

We've missed our target this year.

Our underlying performance is much improved from last year, but we have still missed our target.

How climatic conditions impacted our performance

Our performance has been affected by "one off "weather events, particularly in London where the built-up environment means heavy rain fall causes more sewer flooding than in the Thames Valley.

For example, the storms in August resulted in hydraulic floods being 600% over target, while the wet November increased hydraulic floods to 140% over target.

What we're doing to improve our performance

We're conducting a review of planned activities and focusing on blowbacks and repeat floods, both of which should be preventable.

We will improve triaging at the first customer contact point and also data collection at the first touch point from the engineer.

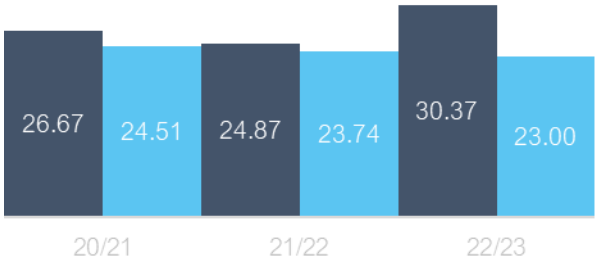
This will allow quicker investigation and more efficient and accurate scheduling of follow-on work, whilst also allowing our teams more time to analysis floods and identify trends to improve proactive options to prevent flooding.

Pollution incidents

ES01

Penalty: £9.345m

Number of pollution incidents per 10,000km of our wastewater network that pose a danger to the environment



How we've done

We've missed our target this year.

This is a calendar-year measure.

Based on the latest update from the EA, we had 331 pollution incidents[20] in 2022.

How climatic conditions impacted our performance

Our performance has been adversely affected by the summer drought which caused lower flows in rivers resulting in discharges having a greater impact than they would otherwise have done.

As we operate in one of the most densely populated parts of the UK, our infrastructure sometimes struggles to cope with the volume of sewage that is put into it, particularly during periods of heavy rainfall.

During the intense rain in January, and storms in February 2022, we also experienced power outages and, in some instances, were unable to operate our pumps. This led to an increase in pollution incidents.

It should be noted that the Environment Agency ("EA") has chosen to exclude the impact of Storm Eunice (seven incidents in February 2022) from our pollution's performance metric for this reporting period.

What we're doing to improve our performance

Our plans for improving our performance are set out in our Pollution's Incident Reduction Plan ("PIRP"), which we are in the process of updating and will publish a revised version later in the year.

As well as rolling out the PIRP initiatives, we will deliver a transformation plan focused on additional training and changes to our existing processed.

The EA has provisionally assessed our 2022 Environmental Performance Assessment ("EPA") as 2-star (out of 4) [21].

You can find more details in our PIRP.

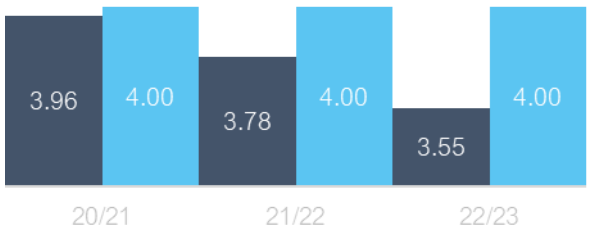
[20] This excludes seven incidents relating to Storm Eunice that the EA has stated won't count in our total.
[21] Per the EA's provisional EPA letter dated 26 May 2023.

Sewer collapses

CS02

Reward: £0.340m

Number of sewer collapses per 1,000 km of sewer network [22]



How we've done

We've met our target this year.

We have met the target for this performance commitment for the third successive year.

This consistent level of performance follows the implementation of the new collapse reporting definition in year 1 of AMP7 and an increased planned sewer rehabilitation programme in AMP7.

What we're doing to improve our performance

Planned programmes of gravity sewer CCTV survey and rehabilitation will continue in year 4, together with a new delivery model to allow a faster turnaround between the identification of sewer defects on CCTV surveys and the delivery of planned rehabilitation solutions from a wider pool of skilled contractors.

We will also prioritise investment in the planned rehabilitation or replacement of rising mains.

In the longer term, our digital team is scoping a project that will centralise the sewer collapse and rising main burst history data, enabling better asset deterioration analysis and long-term planning.

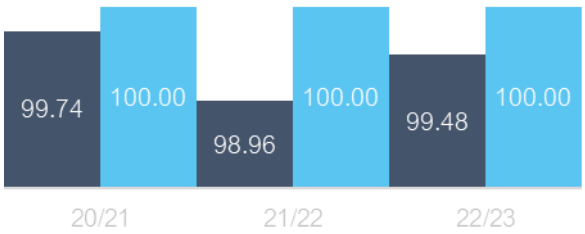
[22] This is the number of sewer collapses or breaks which have impacted our customers or the environment, and where we have replaced or repaired the pipe.

Treatment works compliance

CS01

Penalty: £0m

% of our treatment works compliant with their discharge permit conditions



How we've done

We've missed our target this year.

This is a calendar year measure.

Although we have marginally failed to meet our target for 2022, we will not receive a penalty (as it is above the deadband).

We have had two numeric failures this year:

- Chalgrove STW, ammonia failure (May 2022)
- Fobney WTW pH failure (February 2022).

Senior incident reviews have been conducted for each of these failures and actions agreed to mitigate the risk of similar occurrences. Each review identified different causes.

Progress on the agreed actions is reviewed at the monthly compliance and pollution steering group which is chaired by the operational leadership team.

What we're doing to improve our performance

Over the next two years, we will continue to invest in sewage treatment plants and sewers, including significant upgrades to wastewater treatment plants and sewerage networks to reduce storm discharges and pollution incidents.

It will help Thames Water achieve its commitment to reduce the total annual duration of discharges by 50% by 2030 compared to the 2020 baseline. This commitment includes an 80% reduction in discharges in particularly sensitive catchments.

Despite a detailed investigation, no definitive root cause was identified for the pH failure. However, we have identified actions to improve our processes going forward.

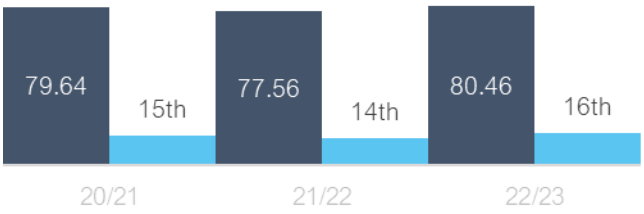
We are investing record sums in upgrading our sewer systems and treatment works and are striving every day to reduce the discharge of untreated sewage into our rivers.

D-MeX

AWS01

Penalty: £5.680m

Customer experience out of 100 through customer survey and actual performance [23]



How we've done

Despite stable performance on this measure, the sustained improvements of other water companies have impacted our league position.

In the year, we were ending the existing contractor partnership in place in the Thames Valley area. We experienced some issues during this period as the handover was taking place.

What we're doing to improve our performance

We regularly review the quarterly qualitative survey data with senior and operational stakeholders within the business, to identify and implement improvement measures.

We're establishing new service delivery contracts for our developer markets, replacing the outgoing agreement and aiming to embed and sustain further improvements through this.

From April 2023, we've made environmental incentive discounts more accessible to developers that include water efficiency elements in their designs.

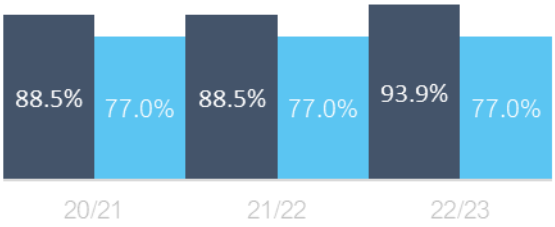
A new workflow management system will be delivered by the end of 2023/24.

[23] *The 17 largest water companies in the industry take part in a monthly qualitative customer satisfaction survey (50% of the measure). The remaining 50% is how we perform against selected Water UK service level targets. The results are used to calculate rewards or penalties based on the relative performance of the company.*

Risk of severe restrictions in a drought *DW01*

Reputational only

% of customers in our region at risk of severe water restrictions during a 1-in-200-year drought



How we've done

We've missed our target this year.

This measure has been adversely affected by our performance in leakage, mains repairs and PCC.

This AMP, we forecast that the Swindon and Oxfordshire ("SWOX") water resource zone would be in surplus.

However, the level of demand in that area over the past years has exceeded what was forecast, resulting in a deficit, partly due to the weather and partly due to changing habits since covid as more people continue to work from home.

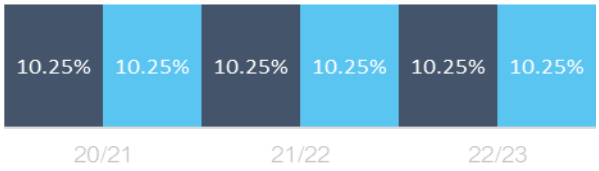
What we're doing to improve our performance

Our performance of this measure will improve as components of our action plan deliver our turnaround.

Risk of sewer flooding in a storm *DS01*

Reputational only

% of the population at the risk of sewer flooding in a storm from a 1 in 50-year storm



How we've done

We've met our target this year.

What we're doing to improve our performance

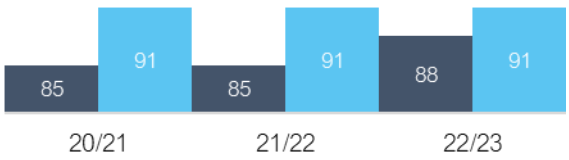
The key factor that may change our reported performance in this AMP will be the opening of the Thames Tideway Tunnel. Other than that, we have no major flooding schemes planned.

Bespoke performance commitments

Satisfied vulnerable customers *AR05*

Reputational only

satisfaction levels of customers who are on our priority services register (%)



How we've done

We've missed our target this year.

There have been no changes to service delivery, but we've improved slightly as we've updated the customer satisfaction measurement from1-5 to 0-10 to align with C-MeX customer surveys [24] increasing the data diversity.

What we're doing to improve our performance

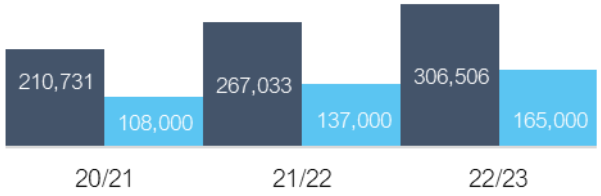
Our wider C-MeX improvement plans will drive continued achievement of this performance commitment.

These measures incentives us to be there for our customers when they need us. You can find out more on our social tariffs in Table 2N on page 152.

Households on our social tariff *ER03*

Reputational only

households receiving support from our social tariff



How we've done

We've met our target this year.

The introduction of a new income and expenditure assessment for customers has had a positive influence on our social tariff growth this year, while the cost-of-living crisis has helped to increase both awareness and demand for our social tariffs and related support.

The rapid growth in households on our social tariff since 2020 is due to our engagement with local authority and housing associations. We have now reached two thirds of the eligible population.

What we're doing to improve our performance

We'll continue collaborating with partners to share data, provide targeted proactive support and optimise the criteria for social tariffs.

Future growth will be reduced as we engage with customers who are hard to reach or new to financial pressures.

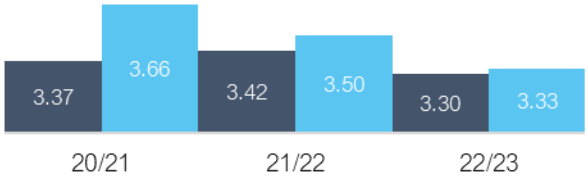
We're expanding criteria for our social tariff so that those spending a high proportion of net income on water can obtain support.

[24] *This change of approach has been agreed with Ofwat.*

Empty household properties *ER02*

Reward: £0.231m

% of empty household properties in our billing system



How we've done

We've met our target this year.

We recruited a voids management team at the start of 2022/23 who have made good progress this year in reducing the number of properties listed on our 'empty' database.

What we're doing to improve our performance

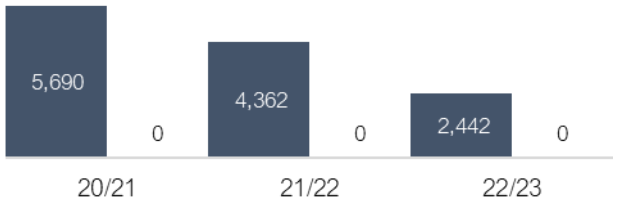
The increase in the number of serviced apartments and Airbnb type properties has proven challenging when trying to bill an end user, and we are currently working on a longer-term solution to address this.

The cost of living crisis is suspected to have had an impact on customers informing us that they've moved into properties, increasing reliance on our voids recovery processes.

Empty business properties *EWS08*

Reward: £0.278m

Properties billed that were previously on listed on our system as empty (nr.)



How we've done

We've met our target this year.

What we're doing to improve our performance

We'll continue to positively engage with retailers, as well as making greater use of outputs from of our external data matching partner.

These measures incentivise us to make sure that all properties that we should be billing are registered on our systems and billed for their water usage.

Unregistered household properties

ER01

Penalty: £0.211m

How we have done against our plan to identify households that are not being billed

20/21	21/22	22/23
not completed	not completed	not completed

How we've done

We've missed our target this year.

What we're doing to improve our performance

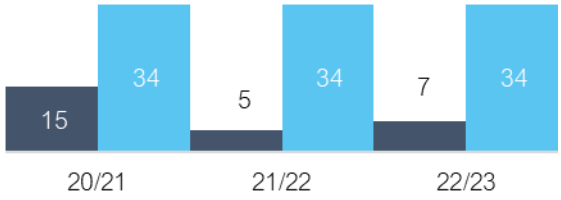
We have plans in place to achieve this target over the next 2 years of the AMP.

Properties at risk of receiving low pressure

BW07

Penalty: £0m

How many properties are receiving, or at risk of receiving low pressure (nr.)



How we've done

We've met our target this year for the third consecutive year by carefully managing the impact of supply and demand during the drought.

In previous years, the exceptional demand would have had a greater impact on this measure.

What we're doing to improve our performance

We will continue to focus on resolving customer issues more quickly while also giving regional teams with local knowledge more responsibility for tracking and resolving each case.

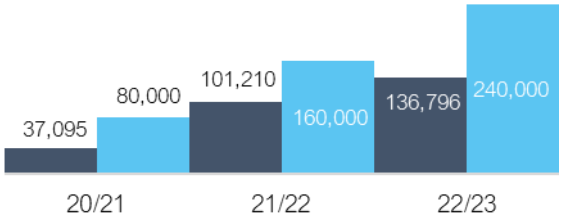
Low water pressure affects our customers by slowing the amount of water coming out of the tap so that even simple things like filling a glass with water takes longer.

Proactive customer engagement

AWS02

Reputational only

Number of times we proactively contact customers in the year[25]



How we've done

We've missed our target this year.

As part of business prioritisation, a decision was taken to scale back activity in this area.

Currently, most of the proactive customer engagement activity is focused on London, due to the greater proportion of customers.

What we're doing to improve our performance

We continue to develop and implement enhanced digital customer engagement capability (e.g. smart meter portal) so that we can proactively email engagement to all smart metered households, and longer term to all households.

Our PR24 plan embeds digital customer engagement and proactive targeted water efficiency visits as part of the effort to meet demand reduction targets.

The table summarise our proactive engagement with our customers in the last year.

Activity	21/22	22/23
Smarter home visits	20,993	2,366
Smarter business visits	3,688	387
Smarter home wastage visits	2,293	300
LAHA[26] visits	-	-
Proactive smart CSL repairs	2,183	2,607
Greenredeem[27]	8,622	669
NHH fat, oil and grease (FOG) visits	7,874	15,825
School visits	173	-
Digital smarter home visits	3,667	-
Digital education visits	126	43
Digital portal engagements	-	-
Proactive lead pipe replacements	14,496	13,389
TOTAL	64,115	35,586

[25] *As part of this PC we also committed to publishing a net promoter score). However since C-MeX replaced NPS as the customer satisfaction measure, we are unable to provide this information.*

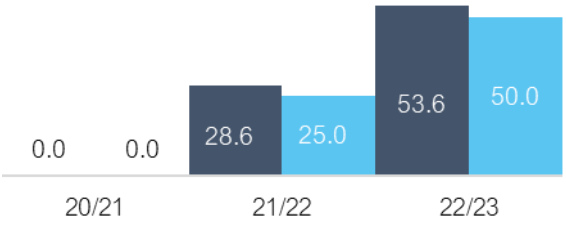
[26] *Local* Authority Ho*using Associations ("LAHA") - discontinued after 2020/21.*

[27] *The Greenredeem scheme motivates our customers to reduce water consumption, through behaviour change, by winning prizes, donating to charities and redeeming gift cards.*

Securing our sites (2020-25 projects) *DWS02*

Penalty: n/a

% of 28 borehole sites we have made SEMD compliant



How we've done

We've met our target, this year.

This is a PC where our performance is assessed at the end of AMP.

We've delivered 15 projects so far in this AMP and are ahead of schedule.

What we're doing to improve our performance

We introduced a new governance structure at the start of AMP7 which has improved the outputs.

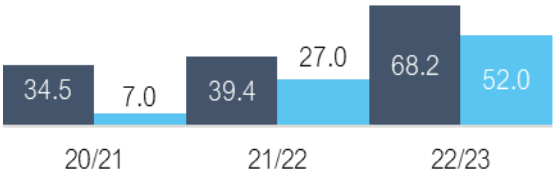
This, together with improved dialogue with our suppliers and contractors, means that we are on target to deliver all the outputs for AMP.

Security and Emergency directives ("SEMD") are notices, issued by Defra under s208 of the Water Industry Act 1991, about national security or the need to mitigate the effects of a civil emergency.

Securing our sites (legacy projects) *DWS03*

Penalty: n/a

Percentage of 264 AMP6 sites we have made SEMD compliant (%)



How we've done

We've met our target this year.

This is a PC where our performance is assessed at the end of AMP.

We've delivered 180 projects so far in this AMP and are ahead of schedule.

What we're doing to improve our performance

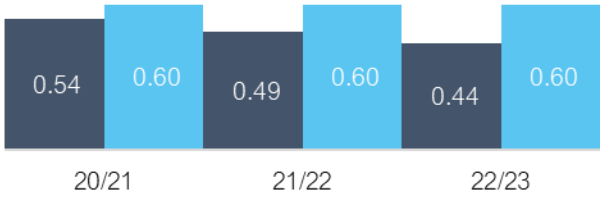
At Hampton WTW, there was a delay to planned works due to the contact tank leaking, but a workaround has now been found and progress continues.

We continue to work collaboratively across the delivery teams to provide the most efficient and cost-effective approach and are on target to deliver all the outputs for AMP.

Acceptability of water to consumers *BW08*

Penalty: £0.0m

Times we've been contacted [28] by customers about their water per 1000 population



How we've done

We've met our target this year.

This is a calendar year measure.

What we're doing to improve our performance

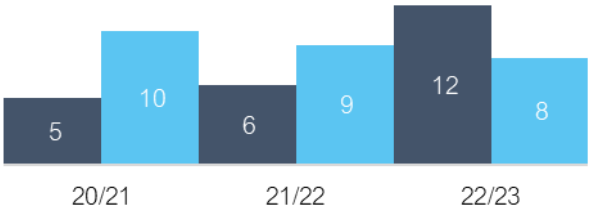
We forecast that performance will be maintained below the target of 0.60 during the AMP.

We will continue to minimise customer complaints relating to water quality issues through day-to-day operational management and provision of relevant information on the company's website relating to typical water quality issues.

Number of water quality events *BW09*

Penalty: - £0.142m

Water quality events categorised as 3, 4 or 5 by the DWI that impact customers (nr.)



How we've done

We've missed our target this year.

This is a calendar year measure.

Three quarters of the notices issued relate to network and site incidents.

The remaining quarter relate to the condition of internal plumbing systems which are outside of the company's direct control.

How climatic conditions impacted our performance

Our performance has been particularly impacted by climatic events that have exposed the lack of resilience within our supply systems.

What we're doing to improve our performance

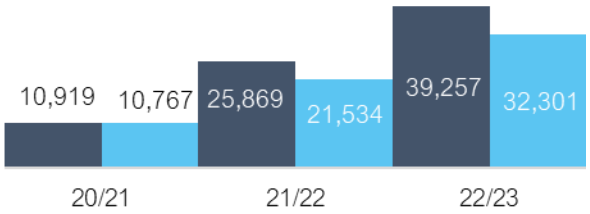
Our improvement in this metric is strongly linked to our plans for leakage and mains repairs, along with water quality specific improvement schemes.

[28] *The contact might be in relation to the taste, odour or cloudiness of their water, or a report of an illness due to our drinking water.*

Reducing risk of lead *BW10*

Reward: £0.689m

Cumulative number of lead communication pipes we will replace in the 2020/25 period



How we've done

We've met our target this year

This is our third consecutive year of outperforming the target and reflects our focus on accelerating this programme.

What we're doing to improve our performance

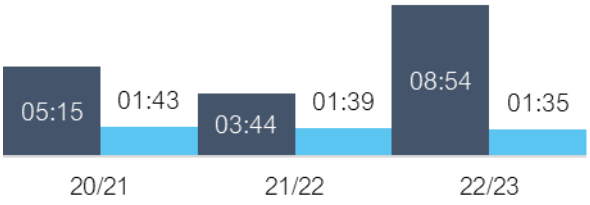
Our performance will be maintained based on the processes established and engrained over the previous 3 years.

Our water mains aren't made of lead, but some older properties have a lead communication pipe between our water main and the outside stop valve. We are gradually replacing lead pipes.

Responding to major trunk mains bursts *BW11*

Reputational only

Average number of minutes customers are without water[29] because of a burst (mm:ss)



How we've done

We've missed our target this year. The number of major trunk main bursts increased from eight to nineteen.

Two significant trunk main events contributed 07:58 to this measure:

- Oxford Event in October (05:53)
- Belsize Road, NW6 in December (02:05).

How climatic conditions impacted our performance

See our explanation for mains repairs.

What we're doing to improve our performance

Improvements in this measure will be attained through the implementation of our action plans for mains repairs.

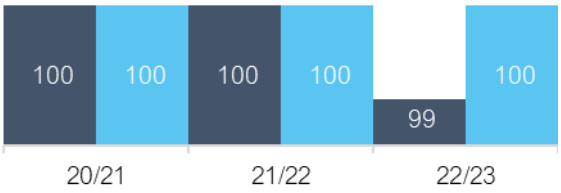
[29] *Categorised as for three hours or more, with trunk mains being our largest network pipes.*

Security of supply index

DW02

Penalty: £0.224m

Our ability to maintain a water supply, particularly during a drought [30]



How we've done

We've missed our target this year.

Our modelling has shown a small risk of insufficient supply in the SWOX region, estimated as 3Ml/d during a peak demand event.

How climatic conditions impacted our performance

We are working to assess how the exceptionally hot and dry weather in summer 2022 and the implementation of the temporary usage ban ("TUB") impacted on our understanding of peak demand.

What we're doing to improve our performance

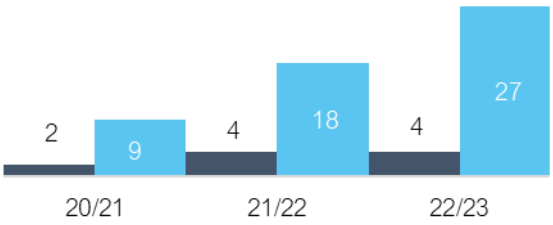
We need to improve resilience in our SWOX area. A programme of work is planned which includes a major investment of our Gatehampton WTW.

Power resilience

DWS01

Penalty : n/a

Cumulative number of our key sites that we have made resilient to power disturbances [31]



How we've done

We've missed our target this year.

This is a PC where our performance is assessed at the end of AMP.

We have not delivered anything specifically against this commitment this year.

However, we have completed a review of our current level of resilience including:

- Understanding of likely impacts e.g. large scale supply loss, waste spills, power outages;
- Progressing key mitigations e.g. priority sites/ tanker locations, generator/ uninterrupted power supply servicing, satellite phones;
- Conducting two internal exercises; and
- Working closely with Defra and Water UK to contribute to national planning.

What we're doing to improve our performance

While we don't expect to deliver any further outputs specifically against this commitment, we will continue to focus on resilience in the round.

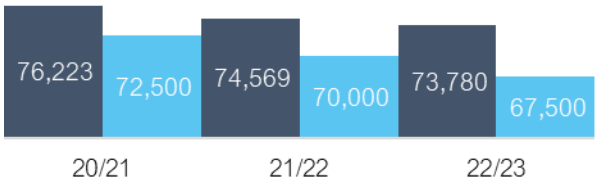
[30] The index is based on the difference between the available headroom and the target headroom in each WRZ in a dry year

[31] For interruptions over three hours.

Clearance of blockages
CS04

Penalty: £8.811m

Blockages[32] we've cleared from the network



How we've done

We've missed our target this year.

Customers' behaviour continues to be a problem as approximately 80% of blockage clearances are caused by customer related issues (fat, oils and greases ("FOG") or wet wipes).

However, we have also encountered resource constraints during the latter half of the year that has impacted on our performance.

What we're doing to improve our performance

We are reviewing our resource and vehicle availability to ensure a prompt, 'right first time' response. We are also continuing to improve the analysis informing our planned programme so that we proactively clear blockages from the most problematic areas of the network. This should also reduce our sewer flooding risk.

The lower the number of blockages, the fewer issues we have with the operation of the sewer network.

BSI for fair, flexible inclusive services *AR07*

Reputational only

Renewal of our annual certification[33]

20/21	21/22	22/23
achieved	maintained	maintained

How we've done

We've met our target this year.

We maintained our accreditation without any non-compliances recorded and with good feedback received.

By modifying our quality management systems, we have improved our contact centres' capability to spot customer vulnerability.

We also rolled out an improved mandatory e-learning module for our customer support teams.

What we're doing to improve our performance

We will continue to identify opportunities to improve training for our frontline field teams.

We are also reviewing the ISO standard which will replace the BSI18477 in March 2024.

---

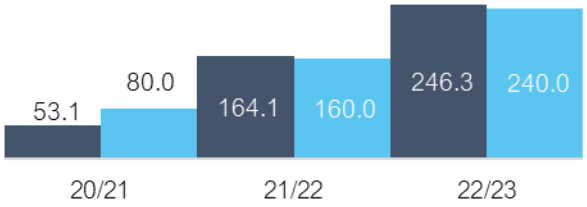
[32] Obstruction in a sewer which causes a reportable problem (e.g. flooding)

[33] In order that our service is available to all, in AMP7, we committed to achieving then maintaining the British Standard Institute's vulnerability standard BS1847.

Installing new smart meters in London *M01*

Penalty: n/a

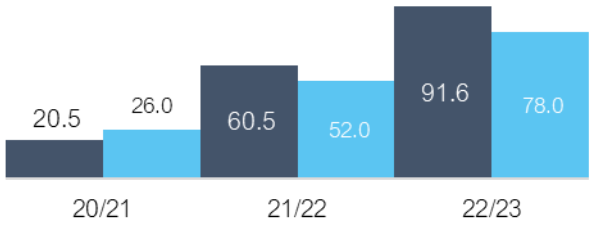
Cumulative number of new, smart [34] meters that we have installed in London since 1 April 2020 (in thousands)



Replacing existing meters with smart meters in London *M02*

Penalty: n/a

Cumulative number of basic[35] meters replaced with smart meters in London since 1 April 2020 (in thousands)



How we've done

We've met our targets this year.

These are PCs where our performance is assessed at the end of AMP.

We experienced shortages in component availability at the beginning of the year, but this was eased through collaborative working with suppliers.

What we're doing to improve our performance

2023/24 will see a change in our work mix as we focus on our internal installation programme.

We'll continue to work closely with our delivery partner to make sure resources are available and utilised effectively.

We'll continue to balance our roll out with providing operational support during winter leakage incidents.

Our smart metering programme is focussed on London as it is our most water stressed area.

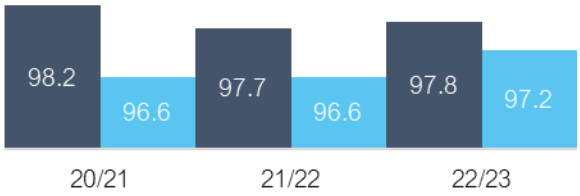
In November 2022, we installed our one millionth digital meter.

[34] A smart meter is a meter that uses advanced metering infrastructure ("AMI") to be read remotely.
[35] An existing meter is one installed in the Thames Water network prior to 1 April 2020 without smart meter capability.

Sewage pumping station availability *CS05*

Penalty: £0m

Average number of pumps available for use in our sewage pumping stations (%)



How we've done

We've met our target this year.

How climatic conditions impacted our performance

Even though we have met this target, our performance has been adversely affected by the increase in both the frequency and magnitude of extreme rainfall events.

Their occurrence after extended dry periods resulted in abnormal volumes of debris causing pump blockages and failures.

What we're doing to improve our performance

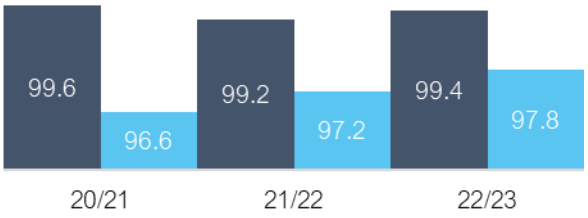
We're automating data collection, removing the need for detailed reconciliation of manual trackers and improving our response times.

Our tracking of flow and pumping trends for each site and the frequency of data capturing is being improved to gain a more accurate reflection of asset availability.

Sludge treatment before disposal *ES03*

Penalty: £0m

Sludge that we treat before disposal (%)



How we've done

We've met our target this year.

The majority of the remaining untreated sludge was a result of ongoing optimisation at our Oxford and Basingstoke sludge centres. A proportion of sludge from Little Marlow was sent to land (restoration) as there is currently insufficient cake reception capacity at our advanced digestion sites due to the optimisation programme.

The volume to restoration was lower than last year.

What we're doing to improve our performance

Investment is being made to improve the condition of our assets. Alongside this, the implications of new regulations (the Industrial Emissions Directive) impacting bioresources.

Sewage sludge is a product of the wastewater treatment process.

Drainage and wastewater management plans *DWMP*

Reputational only

Cumulative % completion of our DWMP in line with Water UK requirements

How we've done

We've met our target this year.

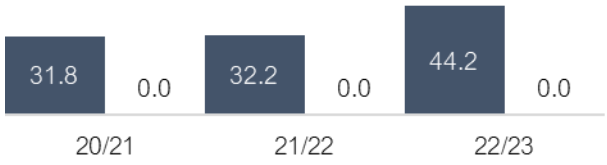
Ofwat has extended the submission deadline from 31 March 2023 to 31 May 2023, so we have agreed with Ofwat that to claim 100% compliance.

Our DWMP was published in May 2023 and will be used to support our business plans for AMP8.

Abstraction incentive mechanism ("AIM") *EW01*

Penalty: £0m

Abstraction from environmentally sensitive sites [36] when levels are low (Ml/d)



How we've done

We've missed our target for this year.

AIM reduces abstraction of water at five environmentally sensitive sites when flow or levels are below an agreed point.

We've worked hard to implement AIM wherever possible, without compromising security of supply, and were able to reduce our AIM score as the drought receded and pressures of our resources reduced.

How climatic conditions impacted our performance

The extremely low river and groundwater levels, high water resources pressure and high demand caused by the drought meant we were unable to comply with AIM at Axford and Pangbourne.

What we're doing to improve our performance

We'll maintain good communications with site operatives to allow us to comply with AIM when possible, however our customers security of supply will always be our priority.

[36] We have included five sites in this measure: Pangbourne groundwater source, and the pumping stations of New Gauge, Axford, Pann Mill, and North Orpington.

WINEP Delivery *NEP01*

Reputational only

Whether we have delivered our WINEP programme[37]

21/22	21/22	22/23
Not met	Not met	Not met

How we've done

We've missed our target for this year.

This year's performance is 'not met', as we have not delivered all the expected schemes in the WINEP programme in part due to internal programme management and cost constraints, along with supply chain issues and land access issues.

The EA has not accepted our request to alter the delivery dates.

These missed outputs also impact the ES02 measure.

What we're doing to improve our performance

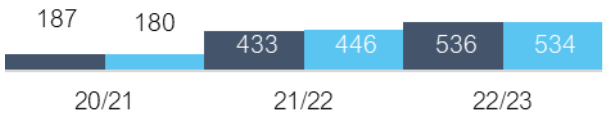
We will continue progress checks with delivery teams to flag risks early and explore mitigation.

WINEP is also now subject to strategic programme review which brings greater coordination and visibility to improve our delivery.

Environmental measures delivered *ES02*

Penalty: n/a

Cumulative number of "green" status schemes in the WINEP programme at 1 Apr 2019, completed in AMP7.



How we've done

We've met our target this year.

This is a PC where our performance is assessed at the end of AMP.

We have delivered slightly ahead of our target, due to acceleration of the event duration monitoring programme.

This year, four of the measures submitted to the EA are yet to be approved (although we are satisfied that they meet the approval criteria).

What we're doing to improve our performance

Our performance is unlikely to be maintained next year as we have a large number of complex schemes remaining in the AMP programme and there is a risk that not all schemes can be completed. Not all schemes agreed with the EA at PR19 remain on the current list of obligations.

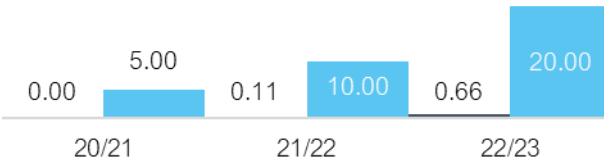
We will continue tracking outputs to understand our delivery position to attempt to partially mitigate this issue by bringing forward 2024/25 schemes where possible and prioritising schemes with the greatest cost-benefit ratio.

[37] The Water Industry National Environment Programme ("WINEP") is a list of actions that Defra has requested all water companies complete in AMP7 to contribute to meeting their environmental obligations.

Surface water management *DS02*

Penalty: n/a

Area (in hectares) where surface water is disconnected[38] from the public sewer system



How we've done

We've missed our target for this year.

This is a PC where our performance is assessed at the end of AMP.

We've experienced delays in project delivery, due to planning and/ public engagement requirements.

This year the cost of living crisis has impacted resourcing in some local authorities.

What we're doing to improve our performance

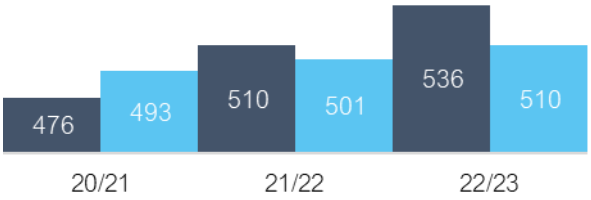
With the majority of legal agreements and collaborative ways of working with our delivery partners agreed, (e.g. councils, charities and schools), we can move forward with supporting project delivery.

We anticipate a significant increase in hectares delivered in 2023/24.

Renewable energy produced *EWS03*

Reward: £2.096m

Amount of renewable energy[39] produced (in GWh)



How we've done

We've met our target this year.

The quantity of renewable heat produced and reported increased due to operations prioritising the use of biogas in the boilers over combined heat and power ("CHP") and due to better data collection.

The Deephams biomethane plant Renewable Heat Incentives ("RHI") accreditation in the year further contributed to this increase.

However, renewable electricity produced decreased as less gas was used in CHP engines.

What we're doing to improve our performance

We will continue to drive performance of sludge treatment, to maximise biogas production and generation assets to maximise the quantity of renewable energy produced (heat and electricity).

Next year, we will be commissioning new solar projects as well as an additional biomethane plant at Mogden STW.

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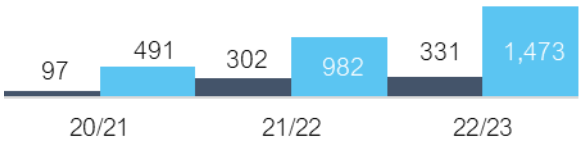
[38] *This is the area which through appropriate surface water management is diverted and passed through either a sustainable drainage system or new surface water system that does not communicate with combined sewers.*

[39] *These are electricity, heat and gas, solar and bromide and energy sources, such as biogas, which are exported to the national grid.*

Enhancing biodiversity *EWS01*

Penalty: n/a

Natural habitats we've created and enhanced our 61 sites of Biodiversity



Interest (nr.)

How we've done

We've missed our target this year.

This is a PC where our performance is assessed at the end of AMP.

While we continue to support nature recovery, the budget related to the delivery of this performance commitment has been removed as we prioritise other deliverables. Alternative options are still being considered.

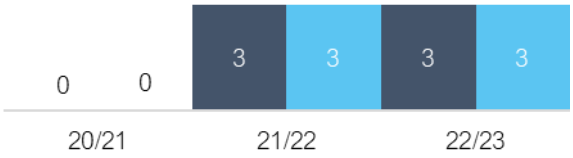
What we're doing to improve our performance

We continue to pursue a corrigenda document to reflect changes in the Defra measurement tool (e.g. to remove areas of land that have been sold and heavily modified waterbodies (reservoirs) where biodiversity enhancements cannot be made).

Smarter water catchment Initiatives *EWS02*

Penalty: £0m

Delivering smarter water catchments initiatives [40] (nr.)



How we've done

We met our target for this measure last year by creating the three catchment plans.

We've continued to deliver a range of actions against each catchment plan in agreement with our external stakeholders, ranging from water quality analysis and modelling to the implementation of wetlands.

What we're doing to improve our performance

We'll continue working in partnership to deliver the actions set out in each subsequent year.

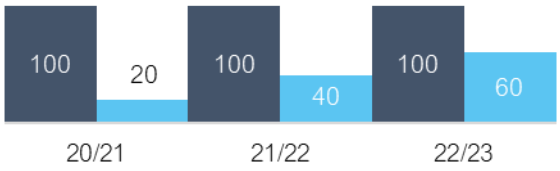
The latest version of our plans can be found on our website.

[40] We have committed to delivering smarter water catchments initiatives in three river catchments (Chess, Crane, and Evenlode). These whole river interventions will address multiple environmental issues.

Natural capital accounting *EWS04*

Reputational only

% landholdings where natural capital stocks are assessed[41] and reported publicly



How we've done

We met our target in the first year of the AMP.

What we're doing to improve our performance

We continue to contribute to the non-numeric target component, but no further improvements are planned.

We are developing a methodology to allow natural capital data to be used during our 'needs' solution optioneering process.

We have over 6,500 hectares of sites including treatment works, recreational sites and nature reserves.

Counters Creek *CC*

Reputational only

Understanding the risk of flooding and level of resilience within the catchment

21/22	21/22	22/23
n/a	n/a	n/a

How we've done

This PC does not have a target this year.

Our performance ('met' or 'fail') will be measured in 2023/24 when we will deliver a fully assured report which sets out our understanding of the risk in the catchment and outlines its long-term strategy for alleviating flooding in the area.

What we're doing to improve our performance

We have resourced up with partners to deliver the output by 31 July 2023 and meet the external assurance required. The external assurance has also been procured.

No further action will be taken on this PC after completion of the studies in July.

We are also required to report annually on how we are managing the resilience of our network in the area, and how we have increased our understanding of the flood risks in the catchment.

You can find this report on the following pages.

[41] *By better understanding the current condition of the environment that we own, or can influence, and the impact of our interventions.*

Counters Creek was a river in London, rising north of Kensal Green Cemetery and joining the tidal Thames south of the old Cremorne Gardens, incorporated into the sewer system when the Victorian sewers were constructed in the late 1800s as part of our combined sewer system.

Counters Creek Study 2022/23

This is our annual report to demonstrate how we are managing our network to manage long-term resilience and reduce flood risk for customers who live in the Counters Creek Catchment.

It outlines the activities undertaken between 1 April 2022 and 31 March 2023.

The London sewer system does not have a conventional dendritic, branch-like structure and so flow routes can vary depending on rainfall locations and intensities.

Below is a map of the area. The bold black boundary indicates the area where rainfall can affect flow in the Counters Creek sewer.

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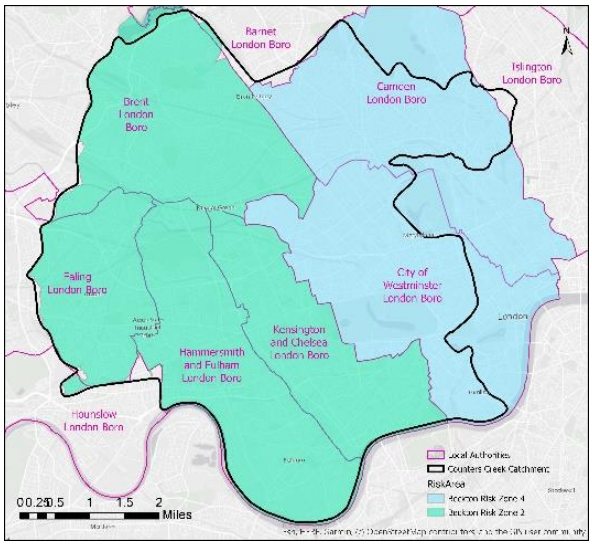


Drainage and wastewater management plans ("DWMP")

The DWMP underwent public consultation in summer 2022. There were very minor technical revisions to the solutions proposed for the Counters Creek Area.

The final DWMP plan was released on 31 May 2023.

To find out more about the DWMP in the Counters Creek area, please refer to the catchment strategy plan ("CSP") for Beckton.

London flood review

On 12 July 2021, the Counters Creek area was affected by an extreme rainstorm that flooded more than 1,500 properties. We commissioned an independent review into the causes of July 2021 floods. The final report from the London Flood Review ("LFR") was published on 12 July 2022 and can be found on our website.

The key findings of the LFR were:

- The main cause of the flooding was the intensity of the rain, compounded by the tide-locking of the combined sewer overflows into the Thames, which caused the network to back up
- All our drainage assets, including pumping stations and various flood alleviation schemes, worked to expected standards, but were overwhelmed by an intensity of rain beyond their design capacity
- There is no silver bullet solution to manage this increasing risk. A range of 'grey' and 'green' infrastructure solutions, as well as a significant increase in public awareness will be required.

The LFR made 28 recommendations. Three of the recommendations are clearly the responsibility of Thames Water to lead on and fit with our sewer flooding strategy. The activity to enable these recommendations is underway and progress on these will be reported annually.

The remaining 25 recommendations either require the close collaboration of several organisations to achieve them or the lead organisation is other than Thames Water.

London surface water strategic group ("LSWSG")

The July 2021 floods highlighted that London's drainage systems are an integrated system-of-systems and that managing flash-flooding from intense storms requires the close collaboration of all responsible agencies. Both the London flood review and the Mayor's surface water roundtable identified the need for a high-level, multi-agency, 'strategic group' to drive the co-ordination and necessary collaboration between the various partners, and to produce and deliver a London-level surface water management strategy and action plan.

This led to the formation of the London surface water strategic group, which is made up of organisations with a strategic interest and/or responsibility for managing surface water flooding. It comprises representatives from six lead local flood authorities, and the Director/Mayoral adviser level representatives from the Greater London Authority, Transport for London, EA, London Fire Brigade, Thames Regional Flood and Coastal Committee ("TRFCCT") and Thames Water.

In the LSWSG commissioning the London-level surface water management strategy, the first recommendation of the LFR have been initiated. The LSWSG are also developing a work programme of quick wins/ no regret actions that can be delivered in parallel to the development of the London-level strategy and actions plan/s. The LSWSG will also review the remaining 25 recommendations made by the LFR.

Sewer flooding resilience programme

We have initiated at £10m programme to identify properties in Counters Creek flooded by the July 2021 storms, assess how they were flooded and, for properties at higher risk of sewer flooding, to install measures to increase their resilience.

To date, we have surveyed over 900 properties and we have begun a risk-based programme on installing anti-sewer flooding devices (non-return valves and Flooding Local Improvement Projects ("FLIPS")), with over 300 properties protected so far.

Assured Counters Creek study

The report to meet the Ofwat performance commitment is complete and going through review by the London Borough of Hammersmith and Fulham and the Royal Borough of Kensington and Chelsea in May and June 2023.

It has also been independently assured with the assurer engaged in the review by the two boroughs.

The final report will be published in July 2023.

TTT Readiness of Beckton STW *ET01*

Penalty: n/a

Ability of Beckton STW is to receive flows [42]

months	20/21	21/22	22/23
Actual	N/A	N/A	N/A
Target	N/A	N/A	N/A

How we've done

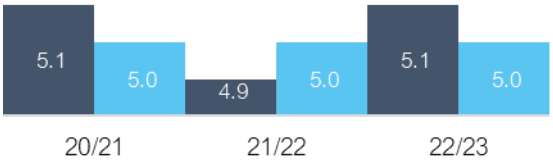
This PC does not have a target for this year.

The TTT isn't due to be fully operational until 2025.

TTT Effective stakeholder engagement *ET02*

Reputational only

How well we are engaging with stakeholder



How we've done

We've met our target this year.

An external research company, Yonder, carry out interviews with key stakeholder organisations to get independent feedback on the effectiveness of our engagement with senior members of key stakeholder organisations.

Engagement is scored between 1 (extremely poor) and 6 (extremely well) via a single survey of multiple questions.

What we're doing to improve our performance

We will continue undertaking our stakeholder surveys and forming a response plan from the results.

[42] *This measures, in months before commission date, that we have completed upgrades to the inlet works at Beckton Sewage Treatment Works ready to receive flows from the TTT.*

TTT Critical asset readiness *ET04*

Penalty: n/a

How ready out infrastructure is for TTT[43]

months	20/21	21/22	22/23
Actual	N/A	N/A	N/A
Target	N/A	N/A	N/A

How we've done

This PC does not have a target for this year.

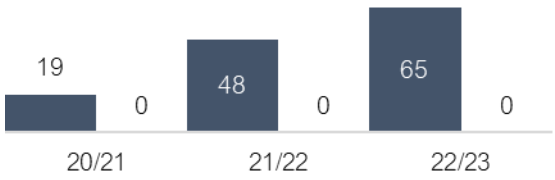
The TTT isn't due to be fully operational until 2025.

However, during 2022/23, we have delivered additional scope (flap valve replacement at Lots Road) following investigations which confirmed decreased asset performance would have impacted the LTT construction and commissioning programme if left unaddressed.

TTT Effective system operator *ET05*

Reputational only

Our % readiness to operate the TTT when it is commissioned[44] [45]



How we've done

We've met out target this year.

What we're doing to improve our performance

We currently forecast all deliverables will be completed ahead of the revised commissioning date.

[43] *How long before commission date, in months, we have completed infrastructure to receive flows from the TTT.*

[44] *Due to the changes to the commissioning date the 21/22 and 22/23 targets have been updated from 100 to 0 in line with the revised delivery dates.*

[45] *The activities relate primarily to establishing a fully trained team to operate the tunnel with adequate procedures and externally accredited management systems.*

TTT Maximising value of land sales *ET06*

Reputational only

Net profit or loss made on the sale of land related to the TTT [46]

£m	20/21	21/22	22/23
Actual	0	0	0
Target	0	0	0

How we've done

We've met out target this year.

No land parcels have been sold in this period.

What we're doing to improve our performance

To prepare for the eventual disposal of these sites, during 2022/23, we completed a Royal Institution of Chartered Surveyors 'red book' valuation of the sites to establish values as at May 2021 which we will use to establish values which we will use to inform business planning/strategy development.

We continue to engage with key stakeholders, including local authorities and landowners, who hold option or pre-emption rights to re-acquire the sites.

We also have regular meetings with Ofwat and its advisors to provide ongoing progress updates.

TTT Managing early hand back of land *ET07*

Reward: n/a

How prepared we are to receive land back from Bazalgette Tunnel Ltd [47]

months	20/21	21/22	22/23
Actual	3	0	6
Target	0	0	0

How we've done

We've met out target this year.

This is a PC where our performance is assessed at the end of AMP.

We've received land back six months earlier than planned. The DRMST Causeway Island was handed back in January.

What we're doing to improve our performance

We will continue to work closely with Bazalgette Tunnel Limited to minimise delays and increased costs arising from programme issues

.

[46] 12 parcels of land that we acquired in relation to TTT. All are scheduled for disposal in AMP7.

[47] In months, how we have avoided project delays or cost overruns that would negatively impact customers by receiving land back early from Tideway once they have completed necessary work.

About complaints

About complaints

Overall, our 2022/23 complaint volumes were 28%[48] lower than in 2021/22.

Telephone complaints

This year we received 54% less telephone complaints than in the previous year.

We've continued to improve our handling of calls from dissatisfied customers using our manager call back process, with particular focus on getting things right first time so that customers do not have to contact us more than once.

In 2022/23 we completed nearly 11,000 first line manager call backs – resolving significantly more issues on the day.

in April 2022, we launched our asynchronous messaging service (WhatsApp) a continuation of the web chat capability we launched the previous year. This has helped us to reduce the volume of billing calls by 19%. We handle around 15,000 messages and over 30,000 webchats each month.

We've continued to make improvements in reducing operational customer wait times (both for water and wastewater) within our operations contact centre which supported in our overall complaints reduction.

Written complaints

Disappointingly, and despite the increased availability of real time contact channels, our written complaints increased by 15%.

Improvement plans

We're making key improvements to improve our complaints performance by:

- Insourcing all inbound customer service activity. This offers a significant opportunity to further improve complaints performance via both main contact channels – written and telephone.
- Our outsourcing review which offers further strategic opportunity to reduce complaints, with contracts awarded to:
  - Tech Mahindra, who will provide digital customer communications
  - EXL will provide back office transactional services
  - SPS Ltd will provide post room and document handling capability.

  Our new partners have been selected to digitise and automate key areas of our service offering, supporting customers to self-serve, and making journeys easier and more seamless.
- Continuing to grow our existing social and Watersure tariffs, we currently support over 300,000 customers and launched additional support schemes and new entry criteria in December and March
- Ongoing process improvements by our operational case management teams, including new ways of working in water and waste, alongside proactive case management for the journeys with the greatest impact for our customers.

[48] *Complaint volumes for 2022/23 were 75,768 (in 2021/22, 105,155).*

London and Thames Valley & Home Counties performance

London and Thames Valley & Home Counties performance

As part of our business plan for 2020 to 2025, we've been asked by Ofwat to report on London performance separately.

We're reporting performance for 18 performance commitments which have been chosen because of our ability to collect the data, benefits for decision making and how useful the information is to our customers and stakeholders if they want to understand our performance at a regional level.

How we define London

Water: London water resources zone for water.

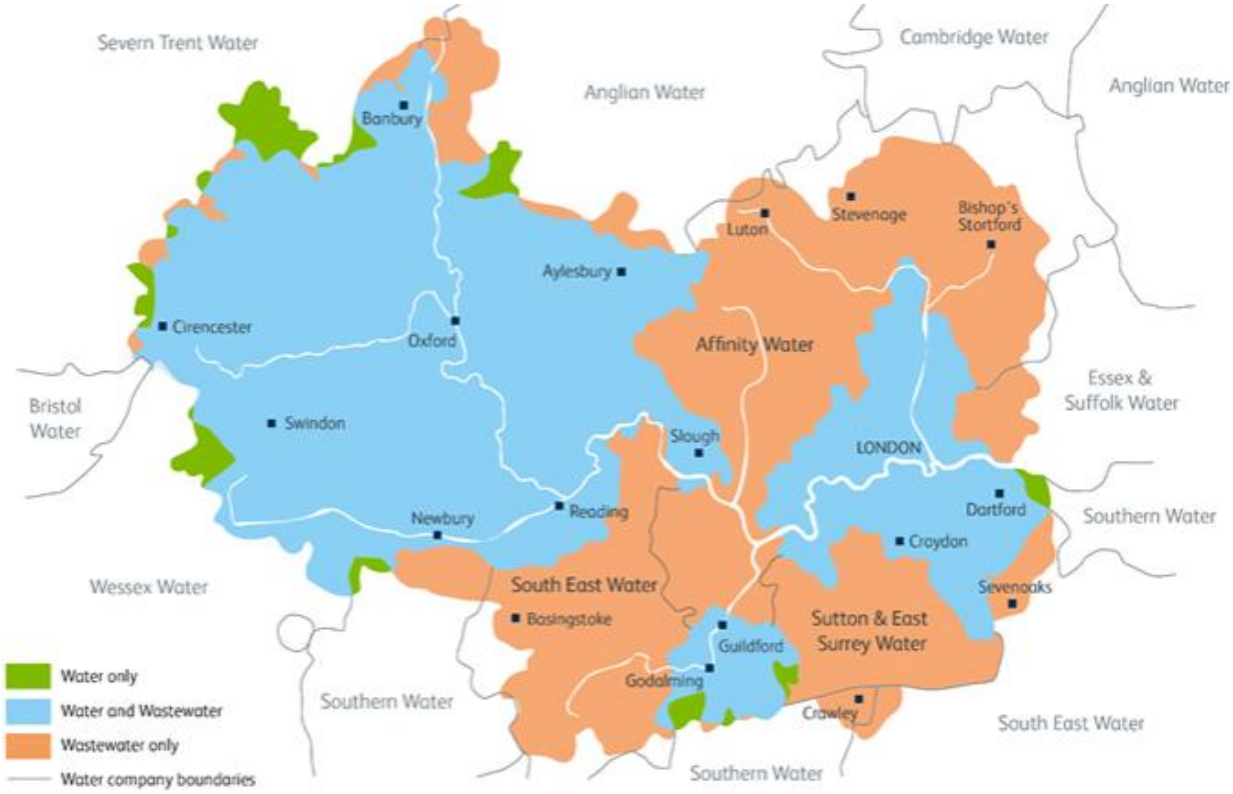
Wastewater: area covered by the eight large London sewage treatment works.

Our regional model

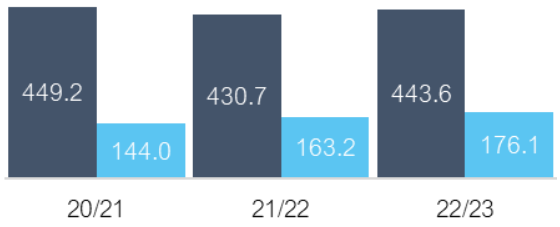
We launched our new regional operating model on 1 April 2022, which focuses separate operational teams on London and, in a separate region, the Thames Valley and Home Counties ("TVHC") – bringing us close to our customers and better driving performance improvement.

This model helps us, and our stakeholders, to better understand the different opportunities and challenges we have in the two regions of our business, particularly relating to geography and the differing ages of our network.

We explain how the total company level performance commitment is calculated in the section above.



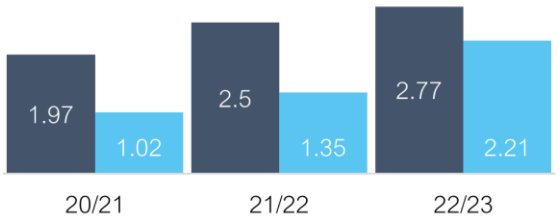
Leakage (annual average)



TVHC is a complex mix of urban towns surrounded by large rural areas where customer demand fluctuates significantly in the summer.

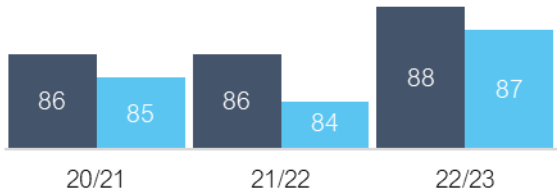
As a result it is more likely to be impacted by resource and performance challenges

Unplanned outage (%)



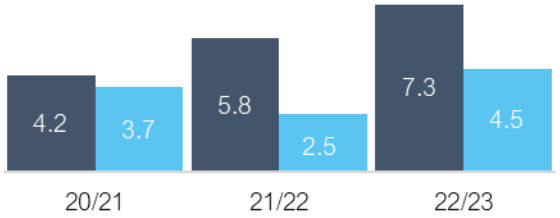
The measure is very sensitive to the size of works that has an outage. As London has a greater number of complex and large production plants, an outage in London will tend to have more impact on the overall % than one in the TVHC.

Satisfied vulnerable customers (%)



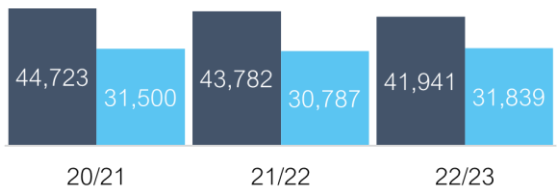
There is no material difference in performance between London and the Thames Valley.

Priority services for vulnerable customers (Reach) (%)



There is a larger proportion of water only company ("WOC") households in TVHC, resulting in a lower % of PSR customers in TVHC compared to London.

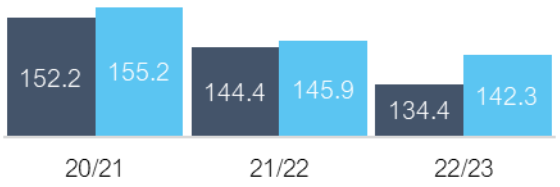
Blockages (nr.)



There are more blockages in London, consistent with there being more sewers in the region.

Per Capita Consumption

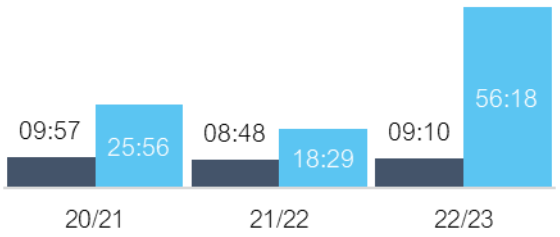
(annual average)



A higher proportion of outside garden space in TVHC caused higher peak demands during warm temperature days. For example, average daily household consumption increased between 13-48% in homes with outside garden space, when temperatures exceeded 25°C.

Water supply interruptions

(mm:ss)

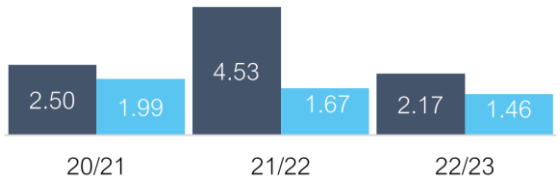


Water supply interruptions tend to be higher in TVHC as alternative supplies are limited by a lack of network connectivity.

TVHC also experiences more variations in pressure levels (due to ground height variations) while its more rural nature increases travel time and speed of identification.

Internal sewer flooding

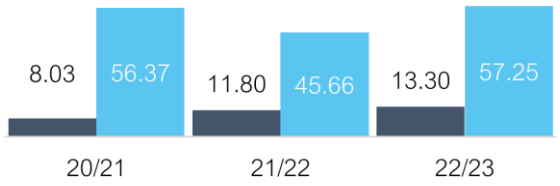
(nr. incidents per 10,000 connections)



Due to the density of the infrastructure in London, heavy rainfall impacts this metric in our capital more than in TVHC.

Last year, London was abnormally affected by the London Flooding event of July 2021.

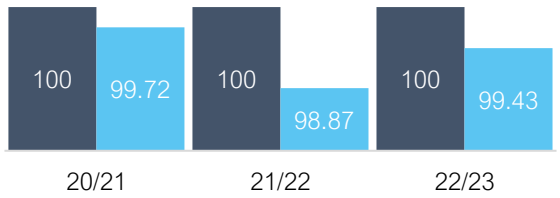
Pollution incidents
(nr. of incidents per 10,000km)



London has fewer pollution incidents as there are not as many routes for potential pollutions to access a watercourse.

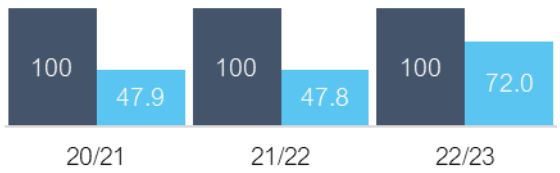
The disparity between the regions is magnified further by the greater sewer lengths in London compared with TVHC.

Treatment works compliance
(%)



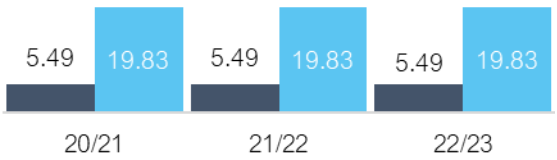
Both our treatment works compliance failures this calendar year were in the TVHC.

Risk of severe restrictions in a drought (% FD consistent calculation)



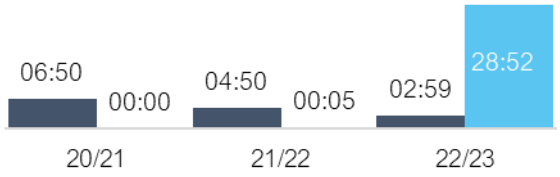
The SWOX area of the TVHC is in supply-demand deficit under 1 in 200 drought conditions, while all other Water Resource Zones ("WRZs") are in surplus.

Risk of sewer flooding in a storm (%)



Because of the way this measure is calculated, the risk of sewer flooding in a storm is significantly higher in Thames Valley than in London.

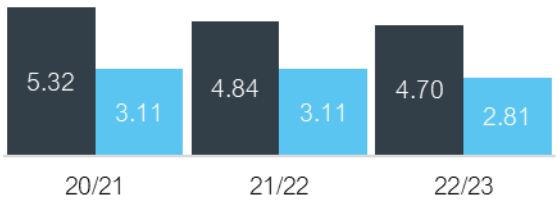
Responding to major trunk mains bursts (mm:ss)



The majority of our trunk mains are contained within the London supply area. However, in 2022/23, the severity of the Oxford event, has skewed the metric.

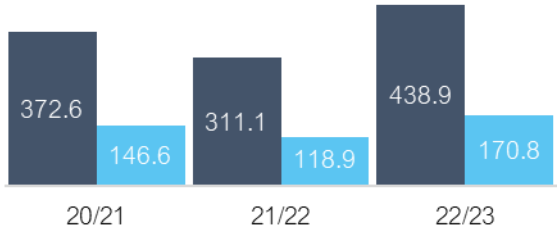
Of the 19 incidents contributing to the overall measure, eight were in Thames Valley with the remaining eleven in London.

Sewer collapses (nr.)



Approximately 85% of sewer collapses happen in TVHC. However, we have seen an overall improvement in performance in both regions.

Mains repairs (per Km)

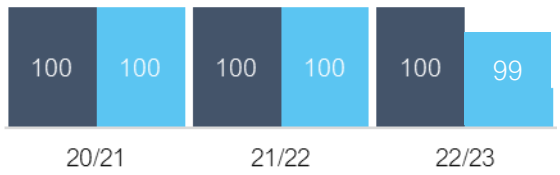


Bursts are more frequent in London as a significant number of old cast iron mains are over 100 years old.

Some areas in London have soil conditions that are highly corrosive to iron mains and/or highly shrinkable, making it more susceptible to movement through changes in conditions.

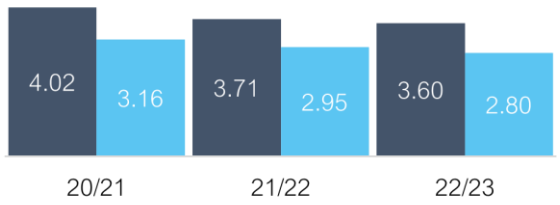
The increased traffic in London also has an impact on pipes due to forces created by increased tonnage, braking and acceleration.

Security of supply index (Score)



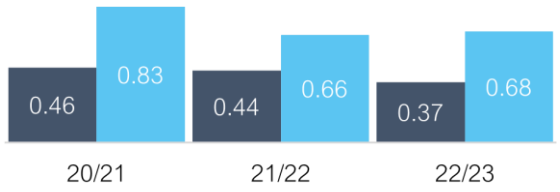
All WRZ across London are in surplus under both annual average conditions and critical period conditions. The only one of our six WRZ not in surplus is SWOX. This reflects the same critical factors as PCC.

Empty household properties (void properties) (%)



We have more empty properties in London, reflecting the higher levels of customer transiency in the capital and the greater density of flats, which have presented access difficulties over the last couple of years.

Acceptability of water to consumers (nr.)



The biggest cause of contacts is the appearance of water. Contacts about illness generate the smallest volumes. There are no obvious reasons for the difference between the regions.

Our regulatory statements

Table of statements and disclosures

The following section contains the statements we are required to make under the terms of our licence conditions and the statutory requirements set out in the Water Industry Act 1991.

This table tells you where you can find this information in our 2022/23 submissions:

Disclosure requirement	Chapter where it can be found	Ref
Accounting methodology summary	https://www.thameswater.co.uk/about-us/investors/our-results	RAG 3
Accounting policy note for price control units	Section 1, Regulatory Financial Reporting – Accounting Policies	RAG 3
Adherence to assurance requirements in performance commitment definitions	Our Regulatory Statements	IN 23/03
Audit and assurance reports x2	Auditors' and assurance reports, page 154 and page 170	RAG 3
Board leadership. transparency and governance principles - annual reporting	Our Regulatory statements - Risk and Compliance Statement	Principles [49]
Board statement on accuracy and completeness of data and information	Our Regulatory statements - Risk and Compliance statement	RAG 3
Common performance commitments compliance with Ofwat's guidance	Reporting Criteria, Appendix 1	IN 23/03
Compliance with sanctions against Russia and Belarus related to the conflict in Ukraine	Our Regulatory statements	IN 22/01
Excel version of APR tables on website	https://www.thameswater.co.uk/about-us/investors/our-results	IN 23/03
Long term viability statement	RAG statements and disclosures, with further information in the Annual Report	RAG 3
Narrative disclosure: analysis of debt	Section 1, Regulatory Financial Reporting – Table 1E	RAG 3
Narrative disclosure: common performance commitments	Our 2022/23 performance	RAG 3

[49] *Board leadership, transparency and governance- principles (Ofwat January 2019).*

Disclosure requirement	Chapter where it can be found	Ref
Narrative disclosure: costs	Throughout this report	RAG 3
Narrative disclosure: current tax analysis	Section 1, Regulatory Financial Reporting – Accounting Policies	RAG 3
Narrative disclosure: current tax reconciliation	Section 1, Regulatory Financial Reporting – Accounting Policies	RAG 3
Narrative disclosure: financial flows	Section 1, Regulatory Financial Reporting – Table 1F	RAG 3
Narrative disclosure: interest	RAG statements and disclosures	RAG 3
Narrative disclosure: outcomes	Our 2022/23 Performance	RAG 3
Narrative disclosure: retail	Section 2, Price review and other segmental reporting - Table 2C.	RAG 3
Narrative disclosure: return on regulatory equity	Section 1, Regulatory Financial Reporting – Table 1F	RAG 3
Narrative disclosure: social tariffs	Section 2, Price review and other segmental reporting - Table 2N	RAG 3
Narrative disclosure: supply demand balance and metering	Section 6, Additional regulatory information - water network plus -Table 6D	RAG 3
Narrative disclosure: totex	Section 4, Additional regulatory information - service level- Table 4C	RAG 3
Narrative disclosure: wholesale revenues	Section 2, Price review and other segmental reporting -Table 2M,	RAG 3
Note on bad debt policy	Section 1, Regulatory Financial Reporting – Accounting policies	RAG 3
Note on capitalisation policy	Section 1, Regulatory Financial Reporting – Accounting policies	RAG 3
Note on revenue recognition	Section 1, Regulatory Financial Reporting – Accounting policies	RAG 3
Our approach to open data	Our Regulatory statements	H2Open
Protected land sales under Condition K	N/A	IN23/03

Disclosure requirement	Chapter where it can be found	Ref
Reporting Criteria	https://www.thameswater.co.uk/about-us/investors/our-results	
Ring-fencing certificate	Our regulatory statements - Directors' Ring-Fencing Certificate	RAG 3
Risk and compliance statement	Our regulatory statements - Risk and Compliance Statement	IN23/03
Statement as to disclosure of information to auditors;	RAG statements and disclosures	RAG 3
Statement explaining out/under performance of the return on regulatory equity	Section 1, Regulatory Financial Reporting – Table 1F	RAG 3
Statement explaining the variance on infrastructure network reinforcement charges;	RAG statements and disclosures	RAG 3
Statement on differences between statutory and RAG definitions;	RAG statements and disclosures	RAG 3
Statement on dividend policy and explanations of dividends paid	RAG statements and disclosures	RAG 3
Statement on executive pay and performance;	RAG statements and disclosures, with further information in the Annual Report	RAG 3
Statement on innovation competition.	RAG statements and disclosures	RAG 3
Tax strategy for the appointed business	RAG statements and disclosures	RAG 3
Transfer pricing disclosures	RAG statements and disclosures	RAG 3
Transactions with associates and the non-appointed business (principles)	RAG statements and disclosures	RAG 5
Water efficiency campaigns included in PCC commentary	Our 2022/23 performance: PCC	IN 23/03
Water supply interruptions- restatement for updated definition	Our 2022/23 performance: supply interruptions	IN 23/03

Adherence to assurance requirements set out in performance commitment definitions

Our Final Determination ("FD") prescribes assurance that we must obtain to meet some of our PC requirements.

PC	Assurance obtained for 2022/23
Smarter Water Catchments EWS02	Engagement of independent third-party auditor to execute agreed upon procedures for this metric under "ISRS 4400 (Revised), Agreed-Upon Procedures Engagements" and where necessary the results of those procedures have been reflected in our reporting.
Renewable energy produced EWS03	This metric is derived from an industry standard tool, carbon accounting workbook. Additionally, the renewables obligations certificates ("ROCs") are approved by Ofgem each month. Engagement of independent third party auditor to execute agreed upon procedures for this metric under "ISRS 4400 (Revised), Agreed-Upon Procedures Engagements" and where necessary the results of those procedures have been reflected in our reporting.
Natural capital accounting EWS04	Although not a FD definition requirement, we appointed WSP to perform a natural capital assessment for 100% of Thames Water's land holdings.
Unregistered household properties ER01	None. As we have not met our target for this metric in 2022/23, we have not obtained external third party assurance.
Surface water management DS02	The ISAE 3000 independent limited assurance report received from third-party, PwC, covers this metric.
SEMD DWS02/DWS03	Externally assured as part of the annual SEMD submission to Defra.
Proactive customer engagement AWS02	None. This report will be published and assured later in the AMP.
Power resilience DWS01	Due to a wider business reprioritisation this programme has been halted so we have not delivered anything against this commitment this year. Additional assurance is therefore not required.
Critical asset readiness for the London Tideway Tunnels ET04	None. This PC does not have a target for this year.
Maximising the value of Tideway project land sales ET06	None. No land parcels have been sold in this period.

PC	Assurance obtained for 2022/23
Empty Business Properties EWS08	Engagement of independent third-party auditor to execute agreed upon procedures for this metric under "ISRS 4400 (Revised), Agreed-Upon Procedures Engagements" and where necessary the results of those procedures have been reflected in our reporting.
Counters Creek CC	This PC does not have a target this year. This will be obtained when the company publish a full report on its understanding of the risk in APR24.
WINEP ES02	The company secures confirmation from the EA that performance has been correctly reported. This year, we have included four measures submitted to, but not yet approved by, the EA (although we are satisfied that they meet the approval criteria).
Enhancing Biodiversity EWS01	While we continue to support nature recovery, the budget related to the delivery of this performance commitment has been removed as we prioritise other deliverables. While no independent third party assurance has been sought, this PC has been assured by our Risk, Audit and Assurance team.
Delivery of WINEP requirements NEP01	Same assurance process as for ES02.

Directors' Ring-fencing Certificate under Condition P of the Company's instrument of appointment

This is to certify that at their meeting on 7 July 2023, the Directors of Thames Water Utilities Limited ("the Appointee") resolved that, in their opinion, for at least the next 12 months and with specific regard to the material issues or circumstances disclosed in the table of factors below:

- The Appointee will have available to it sufficient:
  - financial resources and facilities;
  - management resources;
  - systems of planning and internal control; and
  - rights and resources other than financial resources:

  enabling it to carry out the Regulated Activities necessary to fulfil the Appointee's obligations under the Instrument of Appointment without being dependent upon the discharge by another person of any obligation under, or arising from, any agreement or arrangement under which that other person has agreed to provide any services to the Appointee in its capacity as a Relevant Undertaker.
- The Appointee will ensure that, as far as reasonably practicable, it has available to it sufficient rights and resources other than financial resources, so that if, at any time, a special administration order were to be made in relation to it, the special administrator would be able to manage the affairs, business and property of the Appointee in accordance with the purposes of the special administration order. The Appointee notes that it is working to secure additional shareholder funding but is making prudent preparation should this not occur or be sufficient.
- All contracts entered into between the Appointee and any Associated Company include the necessary provisions and requirements in respect of the standard of service to be supplied to the Appointee, to ensure that it is able to carry out the Regulated Activities; and
- Any issues or circumstances that may materially affect the Appointee's ability to carry out its Regulated Activities are noted below and/or within the Risk and Compliance Statement on page 88.

This Ring-fencing Certificate is an annual requirement under Condition P of the Instrument of Appointment (also known as the 'Licence').

The Board notes that the latest Ofwat guidance set out in IN20/01 for completion of the Ring-fencing Certificate requires the Board to state its opinion on whether the Appointee has 'sufficient' resources to deliver its regulated activities for at least the next 12 months. Condition P of our Licence requires that we have 'adequate' resources in place. The Board is satisfied that its stated opinion set out above regarding the sufficiency of the Appointee's resources also addresses its Licence obligation to maintain 'adequate' resources.

The Licence also requires a statement of the main factors which the Board has taken into account in giving its opinion for the Ring-fencing Certificate.

In providing this opinion, the Directors have considered several factors as part of their enquiries prior to signing this certificate, including but not limited to:

1. Financial resources and facilities
   - The Appointee's Final Determination for the 2020 to 2025 regulatory period, accepted by the Company in February 2020. See section on 'material issues or circumstances' below for further discussion and latest position;
   - The Appointee's available cash resources and borrowing facilities of

c.£4.4 billion (at 31 March 2023), which includes significant undrawn bank facilities and taking into account the Appointee's projected net cash flow for the next 12 months from the date of signing the Ring-fencing Certificate;

- The Appointee's investment grade ratings, as shown on page 188 of this report which retain at least one full notch headroom over minimum investment grade;
- The Appointee's compliance with its financial covenants as disclosed in our Annual Report;
- The Appointee's dividend policy and that it does not impair the Appointee's ability to finance the Appointed Business and takes into account the impact on all stakeholders and having regard to the need to continue to attract equity capital and to ensure compliance with the updated dividend policy and payment requirements of its Licence and associated Ofwat guidance (with updates effective May and June 2023 respectively);
- The preparation of the Appointee's statutory accounts on a going concern basis and its long-term viability as disclosed on page 106 of this report and in our Annual Report;
- The provision of £500 million of shareholder funding by the shareholders in March 2023;
- The engagement between Appointee and its shareholders regarding the provision of further shareholder funding and equity investment and the discussions between the Appointee (with shareholder input) and Ofwat regarding the Appointee's regulatory arrangements;
- Shareholders' commitment to fund £750 million of additional shareholder funding to be drawn during AMP 7 if certain conditions are met and undertaking to hold investment committee meetings in respect of such additional shareholder funding, if certain milestone conditions are met; and subject to approval, to negotiate in good faith commitment letters: and
- That its shareholders acknowledge that the turnaround of the Appointee will continue into AMP 8 and that the development and delivery of the business plan for the period to 2030 that the Appointee will prepare and submit to Ofwat to achieve a regulatory determination that supports the turnaround will require the provision for further equity investment significantly in excess of the current shareholder commitment to improve operational performance and financial resilience. Indicatively, this is expected to be in the region of £2.5 billion, but the nature and amount of such medium-term support will depend on finalisation of the business plan and the regulatory framework that will apply to the AMP8 period.
- See section on 'material issues or circumstances' below for further discussion and the latest position in relation to shareholder funding.

2. Management resources

- The Appointee's People Strategy and People Plans which aim to ensure that the Appointee has continued access, having regard to current labour market challenges in respect of recruitment and retention, to personnel which will enable it to deliver its regulatory obligations. In particular:
  - The Appointee's leadership and organisational structure, operating model and human resources (succession) planning strategy;
  - The Appointee's ongoing process to streamline and simplify its organisational design, taking opportunities to improve efficiency and effectiveness while mitigating risk to service delivery during the change process;

- The Appointee's learning and development programme and culture enables its people to gain skills appropriate to their roles;
- The Appointee's recruitment, reward and recognition strategy to attract high calibre candidates and retain employees with appropriate skills and experience; and
- The Appointee's ongoing commitment to diversity and inclusion enables attraction and retention of diverse talent and allows it to harness the unique skills, experiences and backgrounds that each individual brings - for more detail see our Annual Report.

- The Appointee's confirmation, as shown in our Annual Report and Sustainability Report, of how it seeks to meet the Board leadership, transparency and governance objectives set out in its Instrument of Appointment. This includes:
  - The independence of the Appointee's Board from management; and
  - Continued review of its Board committees, their scope and composition.
- The Appointee's comprehensive programme of Board and Executive meetings supported by appropriate reports and information to enable high quality decision making.

3. Systems of planning and internal control

- The Appointee's corporate risk register, enterprise risk management and assurance process, which reviews, monitors and reports on exposure to, and mitigating controls over, risks and uncertainties as disclosed in our Annual Report;
- The Appointee's performance in respect of its Performance Commitments as disclosed in tables 3A-E on page 161 to page 165 of this report and made reference to in the Risk and Compliance Statement on page 92;
- The Appointee's generation and use of relevant, quality information in support of the functioning of internal control;
- The Appointee's business continuity planning process, including plans for loss of people (including to address loss of skilled resource risk), corporate sites, systems (including cyber security and power resilience) and supply chain;
- The Appointee's incident management processes in place which include incident command structure, defined roles and responsibilities, a dedicated customer incident response team and hazard briefs. These arrangements are supported by incident management training, audits, learning and an Executive-led incident management and business resilience committee. See section on 'material issues or circumstances' below for further discussion on how the Appointee has responded to, and learned from the 2018 'Beast from the East' and London flooding events in the summer of 2021 during which customers experienced unacceptable levels of service;
- Improving river health and reducing pollutions is a key priority for the Appointee. Thames Water has been clear that any sewage pollution is unacceptable, no matter what the circumstances. Making the necessary changes will take time and collaborative working to achieve;
- The Appointee's Pollution Incident Reduction Plan (PIRP) is a key component of the River Health Plan to enable delivery of this priority. Steps include the installation of additional sewer monitors, impact of weather studies and focus on combined sewer overflows (CSO) on the network and discharges from sewage treatment

works. The Appointee also published its first 25-year Drainage and Wastewater Management Plan (DWMP) in May 2023 for a resilient and sustainable wastewater service that is fit for the future. See section on 'material issues or circumstances' below for further discussion on the Appointee's potential non-compliance with its environmental permits;

- The Appointee's commitment to integrity and ethical values. Its policies to prevent fraud and other unethical behaviour, mandatory training for employees on ethical behaviours (94.5% compliance rate as at the end of April 2023) and an anonymous whistleblowing hotline which has been supported by a proactive campaign to raise awareness; and
- The Appointee's ability to meet its legal obligations and its processes to comply with UK sanctions legislation. Legally binding undertakings, commitments and other actions in progress to address historic and current exceptions to this relating to leakage, smart metering, and non-household market data together with work to address potential non-compliance with environmental permits are set out in the material issues or circumstances section below.

4. Rights and resources other than financial resources

- The Appointee's purpose, strategy, values and behaviours, which set the 'tone from the top' and a clear direction for everyone across the business for the 2020 to 2025 regulatory period, and its development of policies including health and safety. The Appointee's Board engaged on the development of each component and how they align as Thames Water's 'big picture' to inspire employees and drive the right outcomes. Culture transformation, driven by a specific focus on our values and behaviours, is an integral part of the turnaround plan. The values and behaviours have been defined and launched through companywide 'Living Our Values' events. A new guidance document called 'The Way We Work' sets out for employees the Appointee's values and how everyone should live them. It guides people to do the right thing, make decisions and what to do if things go wrong. Values and behaviours are also an integral part of performance assessment and assessment of potential;
- The Appointee's digital strategy and design principles are supporting transformation of IT performance and resilience – including significant investment in modernisation of underlying infrastructure. This is underpinned by IT policies which seek to ensure the operation and security of the technology assets essential to service provision. The risk of cyber-attack is increasing as a result of the wider geopolitical climate. Through its dedicated cyber security programme the Appointee continues to improve its cyber security controls and to invest in its cyber defences, strengthen its IT capability and enhance its respond and recover capabilities;
- The Appointee's ability to be resilient by anticipating, coping with, recovering from and learning from disruptive events in order to maintain and improve quality of services for its customers and protecting the natural environment both now and in the future;
- The Appointee's integrated planning systems and development of a systems thinking approach;
- The Appointee's asset maintenance policies, systems, data analytics and modelling to monitor asset health, which are enabling it to act with

intelligence using data from customers, operations and the environment, to make accurate and proactive business decisions that improve productivity, help to manage risk of asset deterioration and to improve the service that it provides to its customers; and

- The Appointee's insurance programmes, including terms, counterparties and cover limits, which have been reviewed by an independent insurance adviser and approved by the Board.

5. Contracting

- The Appointee's procurement and supplier management arrangements are appropriate for the Appointee to meet its regulatory requirements. These are enabled through a suite of contracts and supply arrangements for third party goods and services which enable the organisation to operate effectively;
- Transactions between the Appointed Business and any Associated Company being at arm's length, as made reference to in this report within the Regulatory Statements (relating to RAG5) and related party disclosures on page108;
- The Appointee neither gives nor receives any cross-subsidy from any other business or activity; and
- The Appointee has no agreements or other legal instruments incorporating a Cross-Default Obligation without Ofwat approval.

6. Material issues or circumstances

Turnaround plan

In accepting the Final Determination ("FD") for the 2020 to 2025 regulatory period the Appointee said that it did not necessarily expect to be able to operate within the cost and service thresholds set out in the FD. The Appointee's central expectation was that it would incur net overspends and net penalties. In accepting, the Appointee's Board did so fully understanding the challenge presented by the FD (including regard to externally assured financial forecasting of key metrics and likely impact on covenants and credit ratings) and the support provided at that time by the shareholders in making its decisions.

The Board recognises that the position has deteriorated further with significant forecast performance penalties and costs beyond those anticipated when the FD was accepted including significant inflationary headwinds in core areas of expenditure (including labour, energy prices and chemicals). In addition, the Appointee is currently underperforming against customer expectations and Ofwat has assessed the Appointee as 'lagging behind' compared to some of the other water companies in the sector. This is why, in March 2021, the Board and Executive developed a turnaround plan to transform the performance of the Appointee through 'fixing the basics', 'raising the bar' and 'shaping the future'. The plan's initial focus is on health and safety risk reduction and the reduction of compliance risk associated with the Appointee's regulatory obligations as highlighted within this Certificate over the remainder of AMP7.

The Appointee has built on the foundations laid in 2021/22 and made good progress on 'fixing the basics' in 2022/23. This has included £500 million of funding from shareholders, delivery of a record level of investment by insourcing capital delivery, insourcing asset maintenance activity, surpassing the target for the number of meter installs, reducing complaints volumes and bringing back onshore and inhouse our customer contact agents, and supporting customers through the cost of living crisis with £50 million of social tariff support.

Nevertheless, the Appointee has faced several unexpected challenges over the period, again impacted by weather events with a record drought and freeze / thaw event affecting progress on water metrics, including a risk to water quality (CRI), leakage and pollutions performance. These impacts have been exacerbated by the

Appointee's asset health deficit, which has accumulated over decades. High inflation and the consequential decline in real wages (the cost of living crisis) has also materially impacted financial performance causing significant financial strain on the Company.

The Appointee is clear that there is a considerable lag between investment and performance improvements with large programmes of work spanning multiple years which will take time to reap the benefits. Until the end of AMP7 the turnaround plan remains focussed on fixing the basics and improving operational grip to be able to stabilise and improve performance in AMP8. To this end, on 11 April 2023 the Appointee published its performance improvement action plan which sets out the core steps it is taking to deliver improved outcomes against several key common performance commitments. The Appointee is seeking an external review of the turnaround plan and will consider revisions as appropriate.

Additional shareholder funding and equity investment

The Board notes that in June 2022 the Appointee, the Board of Kemble Water Holdings Limited and the Appointee's shareholders approved a business plan for the remainder of this AMP which assumed £1.5 billion of shareholder funding to, amongst other things, accelerate compliance spending, invest in improving operational performance and increase financial resilience.

Since June 2022 the TWUL executive team has developed a revised internal business plan for the remainder of this AMP which assumes an aggregate of £1.25 billion of shareholder funding, which has been approved by the Board for the purposes of year-end reporting and delivery of this Ring-fencing Certificate. This revised business plan reflects rephasing and other initiatives which offset inflation in the period such that total expenditure is in line with the June 2022 business plan, with the Appointee prioritising expenditure in areas that deliver most benefit for customers, communities and the environment. The priorities have been shaped by the Appointee's engineering and design capacity, the maturity of available technology and overarching financial discipline.

The updates to the June 2022 business plan have been discussed with its shareholders for the purposes of year end reporting and the TWUL executive team is progressing a further iteration of the business plan for the period to 2030, including additional diligence and modelling in relation to asset health within the business which is expected to be a material factor in finalising the business plan.

To support the Appointee in the delivery of its turnaround, its shareholders provided £500 million in shareholder funding (the "Initial Shareholder Funding") in March 2023. The Appointee and its shareholders are currently engaged in a collaborative process to agree on and to facilitate the making of additional commitments to fund the additional £750 million assumed in the Appointee's internal business plan (the "Additional Shareholder Funding") and to acknowledge the possibility of further equity investment in the medium-term significantly in excess of the current shareholder commitment. Indicatively, this is expected to be in the region of £2.5 billion, but the nature and amount of such medium-term support will depend on finalisation of the business plan and the regulatory framework that will apply to the AMP8 period. In addition, the Appointee (with shareholder input) is in discussions with Ofwat regarding the Appointee's regulatory arrangements.

The Appointee's shareholders have evidenced their support for the Appointee through a Support Letter in July 2023 (which replaces that from June 2022), where its shareholders committed to fund the Additional Shareholder Funding if certain conditions are met (and have undertaken to hold investment committee meetings in respect of the Additional Shareholder Funding if certain milestone conditions are met and subject to approval, negotiate in good faith commitment letters), including:

- investment committee approval by each shareholder on a several basis, not a joint and several basis;
- satisfactory regulatory arrangements being agreed, business plan finalisation, no lock-up, trigger event or event of default under the Company's financings, ratings requirements aligned to the cash lock-up requirements in the Appointee's licence and execution of definitive finance documentation; and
- no insolvency, special administration, change to position in the ring-fencing certificate, nationalisation or shareholder funding illegality.

The Directors considered that the Initial Shareholder Funding already provided in March 2023, discussions between Ofwat and the Appointee in connection with the Appointee's engagement with its shareholders during March to July 2023, the Support Letter, a letter from Kemble Water Holdings Limited to the Board in July 2023 and the process which is ongoing to facilitate commitment letters in respect of the Additional Shareholder Funding provided sufficient comfort at this time for the Board to consider that sufficient resources are or would be available to progress its business plan.

However, there is no certainty that the Additional Shareholder Funding will be forthcoming and the provision of funds, including in respect of raising funds through the issuance of further shareholder funding and equity investment, could be vetoed by a shareholder or shareholders under the governance arrangements between the shareholders. The Board will carefully monitor on a regular basis progress towards achieving Additional Shareholder Funding and satisfaction of the conditions for this and keep under review pathways to ensure the Company's continued financial resilience.

The Directors noted that in the scenario where the Additional Shareholder Funding was not forthcoming, the Appointee would consider all options available at that time and could revise its business plan to fit with then available funding, and adjust total expenditure down accordingly.

Implementing a revised business plan would deliver less for customers, communities and the environment and, at that time, may result in the Appointee not having available to it sufficient financial resources and facilities to enable it to fund the Regulated Activities necessary to fulfil in full the Appointee's obligations under the Instrument of Appointment. In addition, TWUL may face credit rating agency downgrades and accordingly its access to the debt capital markets (in particular via its holding company Kemble Water Finance Limited) may be significantly constrained.

The Directors recognise that should they become aware of any circumstances which would change their opinion on the matters considered in this certificate, or other matters, such that they would not give the opinion contained in this certificate or which would materially affect the Appointee's ability to carry out its regulated activities, the Appointee must inform Ofwat of this.

Leakage

The Appointee reduced leakage by 10.7% in 2022/23 using a 3-year average from the 2019/20 baseline, which was below its target reduction of 14.1%.

Underperformance was driven by last year's weather conditions, in particular the prolonged hot and dry summer which created an unprecedented soil moisture deficit causing its pipes and its customers' pipes to move and crack leading to an increase in leakage. The Appointee estimates that this event increased its leakage position by at least 10%. In addition, the UK experienced a prolonged period of low temperatures between 8 and 17 December 2022. On 12 December, the UK average maximum temperature was zero degrees with the 12 and 13 December the UK's coldest days since 28 February and 1 March 2018 (the 'Beast from the East'). Daily minimum temperatures fell widely to between -5 degrees Celsius and -10 degrees across the UK on several

nights. Temperatures then rose significantly, between 17 and 18 December, with increases of over 17 degrees Celsius within 24 hours.

The rapid thaw that followed heavily impacted leakage performance and led to a significant visible leak outbreak. Notwithstanding this, having taken learning from the winter event of 2018, we redesigned how we respond to major incidents and, consequently, customers experienced less than 10% of the supply interruptions experienced in 2018.

The Appointee is making transformational changes to the way that it works but it is mindful that as annual leakage targets are based on a 3-year rolling average, the impact of this year will be felt, not just this year, but for the next two years' performance. Notwithstanding this, the Appointee remains committed to doing all that is reasonably practicable to achieve its regulatory AMP target to reduce leakage by 20.5%. In 2022/23 the Appointee fixed a total of 66,896 leaks (compared with 61,671 in 2021/22). This equates to one leak being fixed almost every 7 minutes 45 seconds.

To help achieve this the Appointee has enhanced its recovery plan developed in summer 2022 into a 'Leakage Transformation Plan' which will build solid foundations for the ambitious and sustainable leakage reductions needed over the coming years. The plan is focused on a data driven approach to better understand unmeasured consumption which will help to reduce leakage on its supply pipes and also help customers manage leaks on their premises. It will also continue to build on existing technology partnerships to support its plan and continue to install smart water meters to track water usage and drive the improvements that are required.

In January 2021 Ofwat confirmed that no specific actions remain outstanding for six of the undertakings under Section 19 of the Water Industry Act. The Appointee also delivered its continuing commitments under Section 19 and will continue to develop and build on these activities to improve the management and delivery of its AMP7 leakage reduction targets, including:

- Regular leakage performance updates on its website with the ability for customers to leave feedback; and
- Regular updates to its stakeholders and direct engagement with customers.

The Appointee has delivered its Leakage Reporting and Insight Improvement Programme (LRIIP), which had been established to address issues regarding leakage reporting to improve assurance checks and processes, and which now provides the insight required to effectively deliver improved leakage performance expected by its customers and stakeholders.

Commitments relating to smart metering

The Appointee believes that it has delivered on its formal commitments in relation to the provision of access to smart meters and digital data services following an Ofwat investigation into compliance with the Competition Act 1998 and is working with Ofwat to confirm that the overarching commitments have been completed to its satisfaction.

Undertakings relating to data accuracy

The Appointee believes that it has delivered the formal undertakings accepted by Ofwat on 6 December 2021 under Section 19 of the Water Industry Act 1991 regarding data accuracy in the non-household market to secure compliance with Condition P of its Licence and its obligations under the Wholesale Retail Code and is working with Ofwat to confirm that the overarching undertakings have been completed to its satisfaction.

London flooding events

In the Appointee's response to David Black's letter on 26 October 2021 related to the extreme (nearly 1-in-200 year) flooding events in London it recognised that it failed to meet customers' expectations and the levels of service they received was unacceptable. The final (stage 4) report by

the independent London Flood Review ('LFR') was issued on 12 July 2022 and found that the intensity of the storm was well beyond the design capacity of the Appointee's systems and that its systems generally performed well, considering the magnitude of the event. The review made 28 recommendations, 25 of which are beyond the direct control of the Appointee as they either require collective action or are for others to lead.

The London Surface Water Strategic Group ('LSWSG'), a high-level, multi-agency partnership of the key surface water flood risk management agencies, including the GLA, TfL, London Boroughs, the EA and Thames Water, has been formed with the aim of driving collaboration between the partners on managing surface water in London. The LSWSG will also lead the development and delivery of a London-level surface water management strategy and associated action plans. The work programme for the LSWSG and the scope of the strategy has been informed by the recommendations of the LFR and other reviews on the July 2021 floods. The Appointee will track and report annually on the delivery of the LFR's recommendations, including those delivered by external parties and directly by the Appointee.

Drought

Following the drought of last summer, the Appointee's overall water resources position has continued to improve and Thames Water is currently operating at DEL-0 (the lowest risk level). The Appointee is continuing to monitor the situation closely taking a cautious approach and continuing to review and improve its preparedness ahead of this summer following the completion of a detailed lessons learnt review after the summer 2022 drought. 70% of the actions from the lessons learnt review have been completed. The remainder have clear owners and accountabilities and are being tracked by the executive. Asset improvement work to recommission the Gateway water treatment (desalination) plant is now complete and following recent deliveries of carbon dioxide, commissioning of the remineralisation process started on 29 June 2023. Subject to the successful completion of the activities needed to bring the plant back online we expect to put water into supply in late July. The Appointee's water resources position remains healthy, and it will be running the plant at a low level to provide data that will support its future use. It should be noted that the carbon dioxide supply chain remains fragile and continued operation of the plant is entirely dependent of securing an ongoing regular and secure supply of the carbon dioxide that is essential to its operation. Notwithstanding this, the third-party delay to required approvals under the Water Supply (Water Quality) Regulations of the new reverse osmosis membranes will potentially limit the site to a maximum of 50Ml/d throughout 2023 and summer 2024.

Flow to full treatment permit conditions

The Appointee is at risk of non-compliance with flow to full treatment permit requirements at a number of its wastewater treatment sites. It has produced a Wastewater Asset Assurance Programme ('WAAP'), which includes significant investment in flow monitoring to enable it to better understand the potential risk of non-compliance at each site. Delivery of that plan and any associated corrective actions at sites would reduce the number of sites at potential risk of non-compliance by around half by the end of AMP7, with the remainder to be addressed in AMP8. The WAAP is part of the business plan for the remainder of AMP7 that has been approved by the TWUL Board, as referred to above. The Board has confidence that this plan will address the risks of non-compliance identified and will closely monitor progress, adjusting the plan as necessary to ensure that it remains appropriate for reducing TWUL's potential compliance risk.

As part of its turnaround plan the Appointee is also enhancing its internal governance. This includes enhancing its approach to environmental compliance risks to further strengthen the line of sight of its

environmental permit compliance risks through the Executive Risk Committee, into the Audit, Risk and Reporting Committee (ARRC) and ultimately its Board.

The Appointee remains under investigation by the EA with regard to its compliance with these environmental permits and by Ofwat with regard to its compliance with Section 94 of the Water Industry Act and certain conditions of its Instrument of Appointment. The Appointee is also one of several companies subject to a pending Competition Appeal Tribunal class action by Leigh Day regarding reporting of pollution incidents at wastewater treatment works.

WINEP programme

The Appointee's business plan for the remainder of AMP7, as approved by the TWUL Board and referred to above, will enable substantial delivery of its WINEP programme for AMP7 to reduce compliance risk with regard to its environmental permits and other obligations. There are deliverability constraints associated with the entirety of the WINEP in AMP7, which means that a number of schemes will now be delivered in AMP8. Final planning is taking place to determine the individual projects that will be impacted, after which discussions with regulators will take place.

Asset resilience risk

The Appointee is committed to improving the management of asset resilience risk, to avoid asset failure and to avoid increasing its asset health deficit.

Following development of an asset strategy aligned to its long-term vision and design of a new operating model, the Appointee has continued to develop its management systems and bring further capability back in-house. The Appointee is managing its asset risk through investment and higher operating expenditure in AMP7. In addition, the Appointee is investing a further £700 million to address asset performance and integrity issues through the London Water Improvement ('LWI') Conditional Allowance (which was approved by Ofwat in November 2022). This will see the Appointee undertake works including the replacement of 112km of distribution mains and seven large trunk mains in London. The Appointee is also progressing the development of its Water Supply System Resilience Programme ('WSSRP') which it intends to submit to Ofwat on 28 July 2023 for approval. If approved, this will fund major asset resilience improvements at two of its largest water treatment works in London – Coppermills and Hampton.

In the last year the executive has been undertaking an internal assessment of the Appointee's position on asset health, led by our Engineering and Asset Director. This top-down assessment of our assets builds on an industry-standardised asset deterioration approach and models used at PR09 and PR14. This review will be finalised in the Autumn of 2023 and will enable the Appointee to factor in the costs associated with renewing its assets over the coming decades into its PR24 business plan submission. It is currently estimated that the cost to the Appointee of managing its notional asset health deficit in AMP7 will be around £1.4 billion (2022/23 prices, equivalent of £1.2 billion (2017/8 prices)), and a further £4.3 billion (2022/23 prices, equivalent of £3.7 billion (2017/8 prices)) to stabilise the position in AMP8. Having an asset health deficit means that it costs more

to operate, repair and maintain assets and to deal with extreme weather, which also has implications for the performance of the business and ODI penalties. Having taken decades to accumulate, it is expected that this will take decades to address.

The executive has focussed in recent months on the collection, organisation and categorisation of materials to provide detailed evidence, including site-specific information that supports the top-down analysis. The executive will secure external assurance on the validity of these figures, so they can be reflected in the Appointee's PR24 submission.

SEMD

The external landscape and requirements set out under Security and Emergency Measures Direction ('SEMD') have changed significantly over the last year, with enhanced outcome requirements and guidance, a greater level of regulatory scrutiny and audit, and the establishment of the DWI as the enforcing body (previously this was Defra). As a result, the Appointee's 2023 submission was not only the largest and most comprehensive to date but included a range of positions against different outcomes. In total across an expanded 33 outcomes, four were assessed as 'red'. In response the Appointee has established an SEMD Programme with executive oversight to ensure it identifies and allocates appropriate systems and resources to improving their position. Security is an area of particular focus and risk, containing all four 'red' outcomes.

In addition to this, the Appointee has identified a material risk through its enterprise risk management process relating to changes which take effect in 2025 (beyond the time period of this Certificate), which would more than treble the population for which the Appointee would be required to plan for alternative supplies. This is beyond the Appointee's current capability and plans have been developed that, if funded, will significantly enhance its capability to deliver alternate water supplies to customers. An overview of these has been submitted to the DWI and is currently included in PR24 proposals that will be submitted to Ofwat later in the year.

IED

The Appointee supports the objectives of the Industrial Emissions Directive ('IED'). However, it cannot commit to meeting all the requirements set out in the 'Appropriate Measures' guidance (issued in September 2022) by December 2024. The highly prescriptive approach set out in the guidance goes far beyond the original Best Available Techniques requirements to achieve compliance.

The Appointee has concerns regarding the overall value for money for customers of this work, in the context of other planned environmental improvements. The Appointee also notes, given the constraints it faces in terms of what it is able to deliver, it will inevitably need to focus the capacity it has on those things that matter most for its customers and the environment. The resource that would be required to undertake the full scale of the work envisaged by an extensive interpretation of the IED would mean displacing work to be undertaken on other priority areas.

The Appointee's current estimate is that the cost of implementing IED aligned with the 'Appropriate Measures' guidance will be in the region of £480 million of capital expenditure and a £40 million increase in operating expenditure per annum from the start of AMP8. This is a significant change to the assumptions made in 2019 with the EA expecting compliance by December 2024. Detailed work to survey and scope the work needed at each of the 25 Sludge Treatment Centres to comply with the "Appropriate Measures" is at an advanced stage. The work has revealed that the potential construction activity needed is now far more extensive and a programme of this size will need to be delivered over more than one AMP, especially when considering the requirement to maintain overall treatment capacity during construction activity and the wide range of other

infrastructure improvements that will be required in AMP8. During AMP7 we will focus on applying for the appropriate permits, with appropriate operational changes being planned for AMP8. Discussions are needed with the regulator (EA) to develop an appropriate delivery timescale for all aspects of IED.

The constraints on delivering more quickly include the availability of skilled resources and additional capability to manage such a large investment programme, and the ability of the supply chain to ramp up to the rates required. The Appointee and other companies will need to do significant work to create the necessary pathways and recruit the required skilled individuals to support this programme.

WRMP

Through Water Resources South East (WRSE), the Appointee is working with the five other water companies in the South East to develop an overarching regional plan addressing future water challenges. Drawing from this regional plan, the Appointee published in December 2022 for consultation its draft Water Resources Management Plan 2024 (dWRMP24) focused on its own supply area, setting out how it will provide a secure water supply for a growing population; protect against the growing risk of drought and water shortages; and improve the environment. Following consultation and review of responses, the Appointee will be publishing its Statement of Response and dWRMP24 by the end of August 2023.

Developer services

Following transition to new contractual arrangements in place of its Infrastructure Alliance, the Appointee is experiencing delays to completion of work supporting developers in the Thames Valley and on its major projects portfolio to support new developments. An action plan is being progressed to clear backlogs through full mobilisation of new contracts, recruitment of additional in-house commercial resource and by embedding new ways of working.

In addition to taking all of the above into account, the Directors:

- Procured a 'Review and Recommend' report from PwC, as part of the Directors' Water Industry Act Section 19 Undertaking, to help inform them on their ability to sign the Directors' Ring-fencing Certificate set out in the 2022/23 Annual Performance Report;
- Procured a report from PwC, as the Appointee's auditor, stating whether they were aware of any inconsistencies between this Ring-fencing Certificate and the financial statements or any information obtained in the course of their work; see pages 154 to 159 for PwC's audit report on the Annual Performance Report and the PwC report on the Ring-fencing Certificate which has been provided separately to Ofwat; and
- Undertook quarterly reviews and enquiries during 2022/23 of compliance with the Ring-fencing Certificate included in the 2021/22 Annual Performance Report, to assess the appropriateness of the factors, risk exposure and associated disclosures on an ongoing basis.

Therefore, the Directors have resolved that, in their opinion, and with specific regard to the material issues or circumstances disclosed in the list of factors above, the Appointee will have available to it, for at least the next 12 months, sufficient resources to enable it to carry out and meet its regulatory obligations, as set out in the

Company's Instrument of Appointment. The Directors will continue to formally monitor the factors quarterly during the coming 12 months.

Board approval

This certificate was approved unanimously at the Board meeting on 7 July 2023.

Signed by the Board of Thames Water Utilities Limited:

Ian Marchant
Chairman

Alastair Cochran
Chief Financial Officer

Nick Land
Deputy Chairman and Senior Independent Non-Executive Director

Hannah Nixon
Independent Non-Executive

Catherine Lynn
Independent Non-Executive

Ian Pearson
Independent Non-Executive

Jill Shedden
Independent Non-Executive

Guy Lambert
Non-Executive

Michael McNicholas
Non-Executive

John Holland-Kaye
Non-Executive

Risk and Compliance Statement

Introduction

This statement sets out the processes we have in place to demonstrate to our customers, to Ofwat and to our other stakeholders, our compliance with relevant statutory, licence and regulatory obligations, where Ofwat is the relevant enforcement authority. The obligations pertinent to our functions as a statutory Water and Sewerage Undertaker are primarily set down in the Water Industry Act 1991 and our Instrument of Appointment – our "Licence"[50]. The Licence also requires us to perform duties imposed under any other statutory and regulatory guidelines as necessary to fully discharge our obligations.

Our approach to achieving compliance with our statutory, licence and regulatory obligations is based on establishing sound governance, risk management and system of internal controls.

This statement covers the reporting year and is set out in the following sections.

1. Understanding and meeting our customers' expectations

We are committed to understanding our customers' needs and expectations and responding to them in our ongoing operations and long-term plans. Our programme of customer engagement is led by our Retail Director and overseen by the Customer Service Committee and, for our long-term planning, the Regulatory Strategy Committee (both sub-committees of our Board).

In order to understand what customers want, we have a customer engagement programme that continuously gathers insights into customers' needs and behaviours. Our insights are gained from working with diverse customer groups, using a wide variety of techniques. This includes bespoke research into specific topics, continuous surveys on brand perception and service satisfaction, analysing complaints and listening to social media.

Customers' overarching expectations are clear:

- A water and wastewater service that 'just works' today and in the future
- Provided at an affordable price and in an environmentally responsible way
- By a company that always has good customer service
- Which gives something back to the society and communities it touches.

Our performance commitments are a response to customer expectations and provide a transparent way of demonstrating the extent to which we are delivering for customers (provided in our performance section of this document). For our household customers, C-MeX is the key measure Ofwat uses to evaluate customer satisfaction and compare water companies (with D-MeX the equivalent measure for developer customers). The C-MeX survey uses small samples and does not give us the depth of insights we need to improve our service, so we also monitor and manage our performance against three internal measures. These are:

a) Service survey customer satisfaction

b) Brand perception survey customer satisfaction and net promotor score ("NPS"), a widely used measure of customer advocacy,

c) Complaints.

We are ranked 17th, at the bottom of the industry league table for C-MeX performance, and our aim remains to improve our service, move up the table and reduce the gap between us and the industry median. We have begun this journey by focussing on fixing the basics, for example by getting our complaints down and

[50] Licences and licensees - Ofwat

responding to them more quickly (complaints performance is summarised in the Section 'About Complaints' in this document). However, there is still much more to do, and this is reflected in our plans to transform our key customer journeys.

Central to our plans is to empower team Thames to deliver exceptional customer service. We have relaunched our values and intend to embed our behaviours throughout our organisation to ensure customers are at the heart of all we do in every role.

Key areas of focus in the last year to meet our customer expectations and drive improvements in customer satisfaction, brand perceptions and complaints include:

Water and wastewater service that 'just works' today and in the future

- Installed and replaced 113,000 smart meters across London, the Thames Valley and Home Counties to give customers greater control over their water use and bills, and to help us find and fix leaks
- Sustained our extensive sewer cleaning programme (1,600km) and increased the number of sewer depth monitors to over 14,500, which help to proactively detect 390 potential blockages each month
- Ran an 'every drop counts' campaign to help customers save water during the summer 2022 drought, which together with a temporary usage ban, reduced demand by around 10%
- Reorganised ourselves into teams focused on London and Thames Valley & Home Counties to better meet the needs of customers and communities at a local level
- Ran an 'always fixing' campaign that showed our frontline engineers working around the clock to find and fix leaks and ensure our Victorian pipework is fit for the 21st century, as part of our efforts to help build trust and confidence.

Easy customer experience and tailored support

- Reduced complaints by 28% since last year, after the 44% reduction the year before
- Reduced our complaints response time from 10 to 5 working days for water and wastewater issues, closing around 60% of cases within 3 days
- Recruited over 200 new advisors to bring our billing customer service team completely in-house, so customers always speak to a Thames Water colleague, and we can deliver a better service
- Digitised more of our communications to improve channel choice
- Made our online account management ("OAM") dashboard clearer for customers to understand balances, and past and upcoming payments, and welcomed another 203,000 customers to the service
- Delivered new and improved self-service tools on our website for submitting a meter read and managing direct debits or payment plans
- Increased the number of people on our priority services register by 74,639 to 365,774.
- Retained our BSI 18477 inclusive services accreditation. Working with partners such as Sense, Kidney Care UK, MIND and Dementia UK, we have improved the accessibility of our website and training material for our people and we have enhanced video relay for deaf customers.

A thriving environment and part of the community

- Published our Event Duration Monitor map to provide industry leading transparency around our consented storm discharges, as part of our efforts to build trust and improve performance
- Launched our five-year Catchment Partnership support fund ("CaPs") to

support the partnerships which work to improve the water environment for wildlife and people

- Engaged with over 21,000 children through our schools programme on topics such as the water cycle, water treatment and water saving
- Our employees volunteered 3,700 hours in the local community via our Time to Give programme
- Since its completion, 71% of the young unemployed people on our Kickstart programme have found employment, with 54% at Thames Water
- Partnered with Backyard Nature to create a Justice, Equity, Diversity and Inclusion ("JEDI") and microgrants programme, to deliver water and nature-based activities to young people and groups from marginalised communities or who are underrepresented in environmental conservation.

Fair and affordable bills

- 306,000 customers now benefit from our social tariff, receiving a 50% discount, a 26% increase
- A trust fund of £500k this year to support customers in hardship
- The first of our payment matching scheme customers, where we match money paid towards water debts to help break the cycle of debt and improve lives, reached the end of their two-year agreement and we cleared their outstanding water debts of £283,000.

2. Processes and the assurances we have in place to achieve compliance with our obligations

The Board is accountable and responsible for the prosperity of Thames Water for the benefit of customers, regulators, investors and other stakeholders. Our Executive develop and deliver our strategy and make day-to-day financial, operational and regulatory decisions. This includes responsibility for maintaining sound systems of planning, risk management, internal control and performance management.

The Board and Executive are provided with a range of information sources and evidence, to enable them to broadly assess our overall compliance with our obligations. This includes the determination of the nature and extent of risk it is willing to take to achieve its strategic objectives, and for ensuring that an appropriate risk culture has been embedded throughout the organisation.

The company reports to its stakeholders primarily through the Annual Report and Sustainability Report, and financial statements. This is where we publish our approach to risk management, principal risks and uncertainties and our long-term viability statement. Together these set out the material and emerging risks the company is currently facing, together with mitigation steps.

Our internal control environment (or 'system of internal control') has been designed to:

- Align and be integrated with our risk management approach
- Fully consider best practice, such as Committee of Sponsoring Organisations of the Treadway Commission ("COSO") Internal Control – Integrated Framework
- Fully consider Financial Reporting Council Guidance on Risk Management, Internal Control and Related Financial and Business Reporting.

We are continuing to embed a risk-based 'three lines' assurance model throughout our business. This distinguishes between first line processes and controls, second line oversight and third line independent assurance.

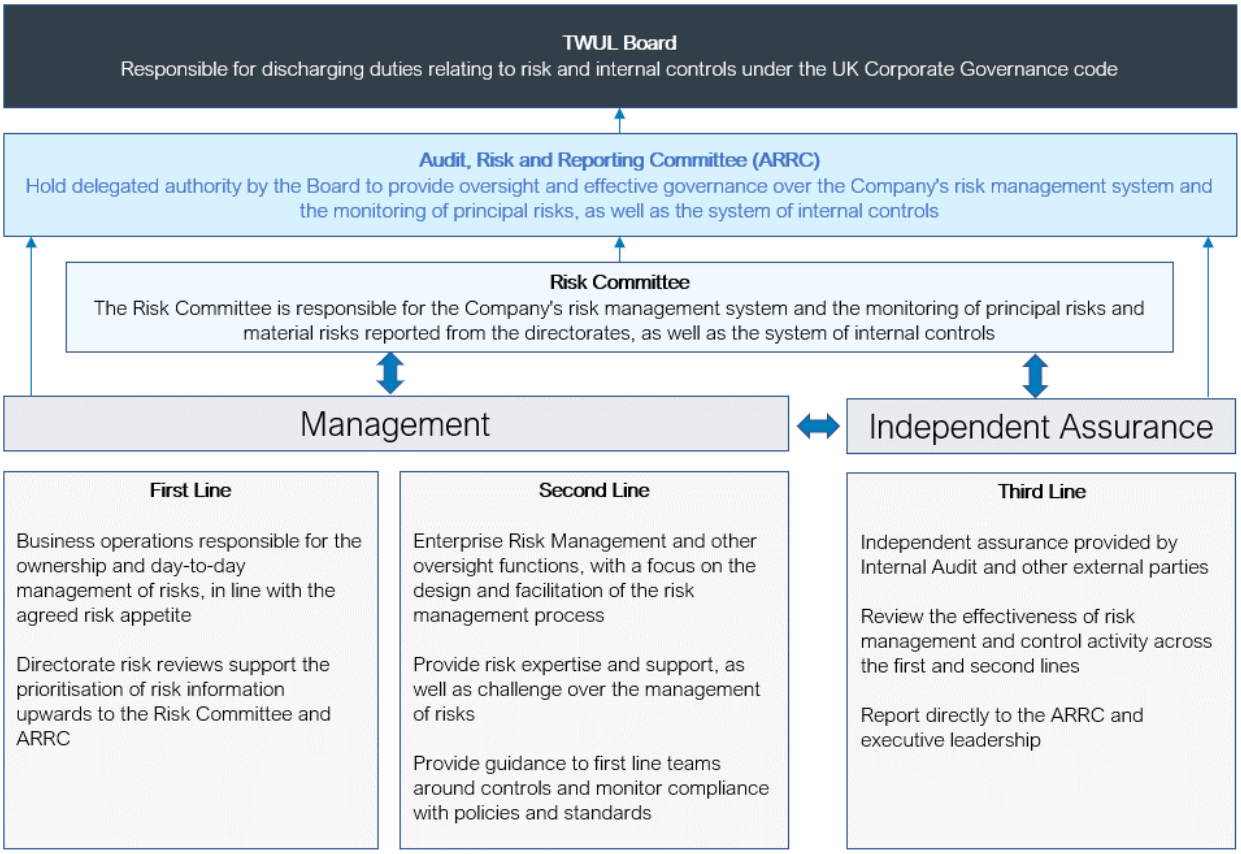
We employ relevant expertise to ensure that we understand our statutory, regulatory and licence obligations and can translate them into policies, standards and procedures.

This expertise includes, but is not limited to, legal, financial, regulatory, health and safety, asset and process engineers and environmental professionals.

We also draw upon additional external expertise where necessary, to ensure that any new, or changes to our existing, obligations are appropriately interpreted and applied.

Management and oversight teams monitor compliance with approved policies and procedures on an ongoing basis. We have also developed and deployed a compliance controls framework where we have translated our compliance obligations into a set of minimum control operating requirements. Through the coming year we are enhancing our working practices and processes to deliver operating effectiveness against these requirements.

The diagram below demonstrates how this structure is being applied across our business.



Source: Thames Water

3. Processes and assurance we have in place to ensure accuracy and completeness of our data and information

Our external reporting process is designed to ensure we provide our customers and stakeholders with information that is easy to understand, provides transparency and can be relied upon, in order to build trust and confidence in our reporting.

To achieve confidence over the quality of the information we publish, including our regulatory submissions, we again apply our "three lines" assurance model.

This best practice approach means that we, and our customers, have a good level of assurance that our publications are accurate, complete and have been prepared correctly.

The approach we take is also guided by our external regulatory reporting (Ofwat) standard.

This establishes the minimum controls over the preparation and submission of information to deliver our response on time and to quality. For example, those submissions with the highest risk require approval of the Board and external independent assurance.

4. Exceptions to our compliance, data and information

We set out below material exceptions to our compliance with our statutory, licence and regulatory obligations.

In addition, our annual Control Self-Assessment process, by which all senior leaders across the business confirm their awareness and compliance with our obligations, has not identified any other incidences of material non-compliance for reporting.

Exceptions to our compliance data and information

Duty or obligation	Disclosure	Actions being taken to improve
Environmental permitting regulations and section 94 of the Water Industry Act 1991, general duty to provide sewerage system	In March 2022, we were one of five water companies to have an enforcement case opened by Ofwat. In TWUL's case this took the form of a formal request under s203 Water Industry Act 1991. As part of our initial information disclosure, we identified that we could have a number of locations that have potentially breached their permits. TWUL remains under investigation by the EA with regard to its compliance with these environmental permits and by Ofwat with regard to its compliance with Section 94 of the Water Industry Act.	In March 2021 we launched our eight-year turnaround plan which focuses on significantly improving performance, with an unprecedented amount of investment directed towards safeguarding the environment. We've fully supported Ofwat and EA with their investigations and have remained focussed on delivering our 'compliance first' plan. For more information, see the Directors' Ring-fencing Certificate.
Performance commitments	For 2022/2023, we failed to achieve 26 of our 52 performance commitments. Full details on our performance can be found in the "Our 2022/23 performance" section of this document	To address this, we are focusing on fixing the basics, raising the bar, and shaping the future as part of our eight-year turnaround plan.

Duty or obligation	Disclosure	Actions being taken to improve
	We note that we are not fully compliant with the Ofwat common methodology for leakage, PCC and Supply Interruptions (full details can be found in our Reporting Criteria). Furthermore, we note that we are waiting for EA final approval for four schemes against Environmental Measures Delivered, ES02 Despite a significant increase in recent investment, the legacy of severe asset deficit and the fragility of our infrastructure were exposed in 2022-23. We recognise that our performance is 'lagging behind' when compared to some of the other water companies within our sector.	Our shareholders showed their support in June 2022 by approving additional expenditure for the current regulatory period to accelerate the delivery of Thames Water's turnaround performance to improve outcomes for customers, leakage, and the environment. By the end of the current regulatory period, we have committed to spend more than £1bn per annum on capital delivery projects. This is a significant target and is a driving force of the investment in our assets.

5. Board Assurance Statement

The Board of Thames Water Utilities is satisfied that we have, except where otherwise detailed:

- Taken appropriate steps to understand and meet the expectations of our customers
- A full understanding of, and have complied, in all material respects, with our statutory, licence and regulatory obligations
- Appropriate systems and processes in place to identify, manage and review our material risks
- Sufficient processes and systems of internal control to deliver our services to customers and meet our obligations
- Provided data and information to Ofwat which is accurate and complete in all material respects.

We also confirm that we have:

- Committed to maintain robust standards of corporate governance, following the requirements of both the UK Corporate Governance Code and Ofwat's Board Leadership, Transparency and Governance Principles (further details can be found in our Annual Report)
- Provided Ofwat with assurance that we have sufficient financial and management resources to enable us to carry out our regulated activities for at least the next 12 months (as detailed within our Ring-Fencing Certificate in this document)
- Sufficient rights and resources to enable a special administrator to run our Company if such an order were to be made (as detailed within our Ring-Fencing Certificate)
- Made sure that all trade with associated companies in the year has been at arm's length, as set out in Regulatory Accounting Guidance (RAG 5 – Guideline for transfer pricing and RAG3.14 – Transactions with associates and the non-appointed business as found within the section "RAG 3/5 statements and other disclosures" in this document
- Maintained investment grade credit rating (as detailed in additional commentary on table 4H of our Regulatory Accounts)
- A principles-based dividend policy in place (details of which can be in the section "RAG 3/5 statements and other disclosures" in this document)
- Considered the financial impact of a range of severe, but plausible risk scenarios materialising to enable us to provide reasonable assurance that we will be able to continue in operation and meet our liabilities as they fall due over the next ten years, to 2032, as set out in our long-term Viability Statement
- Explained how we link Directors' pay to standards of performance as set out in section 35A of the Water Industry Act 1991 (further details can be found in the Directors' Remuneration Report in our Annual Report and Sustainability Report)
- Made our auditors aware of all relevant information (as required under the Companies Act 2006)
- Engaged and challenged management on their data and information assurance approaches through, for example, review and approval of the Statement of Risks, Strengths and Weaknesses and Final Regulatory Reporting Assurance Plans
- Taken action to ensure that any exceptions and weaknesses in the data and information assurance approaches have been addressed, such as through the use of external independent assurance
- Satisfied ourselves that the assurance approaches have appropriately identified and addressed any risks to the provision of accurate and complete data through reports from management and

Director deep dive sessions, predominantly with the Chairman and/or members of the Audit, Risk and Reporting Committee

- Reported in Section 4 where we have not achieved the level of performance agreed in our final determination. Further information is available within the "Our 2022/23 performance" section of this document.

During the course of its work, our independent auditor, PwC, is required to report if there are any material inconsistencies between the Regulatory Accounting Statements and other information contained within the Annual Performance Report; this includes the information contained within this Risk and Compliance statement.

PwC has not identified anything to report in respect of this responsibility. A copy of the Independent Auditors' Report is provided after Table 2O in the Regulatory Accounting section of this document.

Signed by the Board of Thames Water Utilities:


Ian Marchant
Chairman


Alastair Cochran
Chief Financial Officer


Nick Land
Deputy Chairman and Senior Independent Non-Executive Director


Hannah Nixon
Independent Non-Executive


Catherine Lynn
Independent Non-Executive


Ian Pearson
Independent Non-Executive


Jill Shedden
Independent Non-Executive


Guy Lambert
Non-Executive


Michael McNicholas
Non-Executive


John Holland-Kaye
Non-Executive

Our approach to open data

"Open data means making data freely available to everyone to access, use and share."

H2Open Ofwat strategy

In the year since H2Open [51] was published, we have made significant progress as we strive to make open data available allowing us to create value for water customers, communities and the environment.

In how we report

Annual performance report

To make our year end reporting data accessible and reusable by all, we've:

- Published our APR data tables in excel (in the exact table format to allow stakeholders to easily compare our performance with that of other water companies)
- Added graphs for each PC showing our performance over the whole AMP to date (providing our stakeholders with a more complete view of our performance)
- Listed our common PCs in the same order as that of the Water Companies Performance Report 2021/22 ("WCPR") (so that stakeholders can easily compare our performance with that of other water companies)
- Provided additional information in "blue boxes" (to help stakeholders' understanding of terms used in our APR)
- Provided interactive links to relevant areas of our website e.g. other publications such as the Annual Report and our leakage performance pages on our website (so that stakeholders can see more specific information on key subjects)
- Provided a link to our action plan (as this provides the stakeholders with our latest plans to improve performance)
- Produced a glossary of terms as an accompaniment to the Annual Performance Report (to "jargon bust" water industry specific terms).

Our action plan

We published our action plan to improve performance on 11 April 2023.

Instead of a single pdf document, in the interests of transparency, we decided to create interactive web page content that not only links to individual pages on each performance commitment where the WCPR classified us as "lagging behind", but also links to other key information that we already have on our website.

We believe this approach creates the right balance between providing summarised information in a format that our customers and the public understand, and detailed information should they wish to learn more.

It also allows our customers and the public to obtain a more holistic view of our plans to address performance, rather than looking through the narrow lens of just the action plan.

We intend to keep our action plan updated, and this approach allows us to be more agile in the way we do this. For example, by providing links to our Pollution Incident Response and our River Health Improvement plans themselves, when we update these plans on our website, we will not need to change information in our action plan.

[51] *H2Open – Open data in the water industry: a case for change*

Leakage

We provide regular quarterly updates about our leakage performance on our website. We do this to be transparent about our performance and the plans we have to reduce leakage.

By developing open data for stakeholders

Live sewage discharge alerts

Since the beginning of the year, we have been publishing live sewage discharge alerts from over 460 permitted locations on our website (the first water company do so).

Our Discharge Alert Manager ("DAM") product provides a near real-time capability to monitor our STW and CSO discharge points combined with other data from our assets (such as pump runtimes, storm tank levels).

This product incorporates open data from the EA tide gauge Application Programming Interface ("API") to reduce false positive discharge alerts, thus making our operation more efficient and effective. Tidal data is fetched from the API and used to determine the tidal effect at our CSOs within the tideway of the River Thames.

We have 30 EDM at tidally influenced sites and we use this data, in conjunction with the EDM sensor data to determine the current and historical tidal effect so that we can generate accurate discharge alerts.

By developing open data to manage our business

Groundwater infiltration risk dashboard

Our ground water infiltration risk dashboard is linked to a dataset on the EA API – ground water levels.

Several STW catchments have been identified with seasonal high flows related to groundwater and / or river levels. These high flows have resulted in flooding or pollution.

Abstract decision support tool

Using open data from the EA's real time flood-monitoring API has enabled us to create an Abstraction Decision Support Tool, which provides current river flow and level data at key locations along the course of the river Thames.

The tool conditionally formats this information using triggers defined by the EA to provide a red, amber, or green status of the flow and level at each location.

System operators in the London water control centre team in Thames Water then use the tool to inform decisions to increase or decrease abstractions, for example if a key weir level is in constraint and appearing red on the tool but there has been substantial rain in the catchment, the level and flow will likely rise to a level that permits abstraction within a short period of time.

Using the tool, the operator is able to react quickly when the level reaches amber and propose abstraction increases to the EA.

Likewise, if the level in the river turns red, the operator can reduce abstraction and inform the EA to assist their river management.

The tool has empowered faster decision making, which has led to increased raw water abstraction and improved supply resilience.

This has been particularly illustrated in the recovery of raw water storage during drought in 2022, where increases in river flows during September and October were often short-lived following heavy but sporadic rainfall and operators had to react swiftly to capitalise.

Using the tool, operators were able to proactively propose abstraction increases to the EA, which prevented storage reaching critical levels and endangering

By our open data partnerships

We're significant contributors to three Open/Shared Data focussed Ofwat Innovation fund projects.

As a case study - in one project, 'Sewer CCTV AI', we (the contributing partners) intend to create an open data set to stimulate innovation and new product development in the market by opening water company data and making it readily useable through standardisation.

The project will deliver an open reference dataset on Sewer defects; it will be open licenced and can be used by anyone to create and train new AI models. Thames Water are contributing time, expertise and data to this project and have shared >500GB of data into this project so far.

Partnership working is central to our Smarter Water Catchments initiative and builds on existing relationships with key stakeholders in our catchments. Smarter Water Catchments is trialling a holistic and evidence-based approach to understand and improve three catchments within our operational area.

Working with partners such as the Chilterns Conservation Board and the River Chess Association we have been able to share data, create confidence and build trust in the water quality insight we have on our rivers.

Through these pilot projects, we have purchased real-time water quality Sondes which have been monitoring the catchments, detecting issues upstream and downstream of potential sources of pollution.

Two-way data sharing with our partners has allowed us to respond quickly to any potential issues and use multiple sources of information to understand the potential impact on the river.

To date, our partners on the River Chess have been pleased with the actions we have taken, satisfied with our methods of data collection and confident in our approach to ensuring we understand the impacts elsewhere in the catchment. Most importantly being transparent with our data has led to improved levels of trust within the partnership which can be evidence through correspondence, social media posts and a willingness to continue to work in partnership with ourselves.

Compliance with sanctions related to the conflict in Ukraine

Thames Water recognises the increasing extent and reach of sanction legislation following the Russian invasion of Ukraine.

As such, we have processes in place to deal with UK sanctions and to carry out a range of targeted and proportionate due diligence in relation to counterparties where this is necessary.

Following the imposition of sanction legislation, we obtained advice from our legal advisers on the steps that need to be taken to comply with these sanctions, both from a supply chain and customer perspective.

This advice has been circulated to the appropriate senior managers around the business and is being acted upon.

Assurance work around compliance has also been carried out. This confirmed initial sanctions screening had been completed across the business including for new appointments and variations ("NAVs"), non-household ("NHH") retailers, and for our suppliers.

Our 2022/23 Regulatory Accounts

RAG statements and other disclosures

Definitions of appointed and non-appointed business

Our appointed business (an appointee) comprises the regulated activities we provide as a monopoly supplier. This includes functions and duties necessary to provide water and sewage services to our customers. This is detailed in Condition A of our licence of appointment and relates to the duties defined within the Water Industry Act 1991.

In addition to our duties as an appointed business, we also carry out certain non-appointed activities. All of these activities are conducted on an arm's length basis from the appointed business. These activities include third-party discharges to sewage treatment works and other commercial activities, including property searches and cess treatment (treatment of waste from private receptacles not linked to our network).

The results of the non-appointed business include payment of charitable donations. These donations are made out of external shareholder interests and are not funded by customers.

Statement of Directors' Responsibilities

In addition to the requirements of Company law, our Directors are required to prepare accounting statements which comply with the requirements of Condition F of the Instrument of Appointment of the Company as a water and sewerage undertaker under the Water Industry Act 1991 and Regulatory Accounting Guidelines issued by Ofwat.

Separately our Directors are also required to comply with Condition P of the Instrument of Appointment of the Company as a water and sewerage undertaker under the Water Industry Act 1991. The purpose of this condition is to ensure that:

- Appointed Business is conducted as if it is substantially the Appointee's sole business, and it is a public limited company separate from any other business carried out by the Appointee;
- The Appointee retains sufficient rights and assets and has in place adequate financial resources and facilities, management resources and systems of planning and internal controls;
- Any transfers or transactions entered into by the Appointee do not adversely affect the Appointee's ability to carry out the Regulated Activities; and
- The Appointee demonstrates that it is complying with the requirements of this Condition.

These responsibilities are additional to those already set out in our Annual Report and Sustainability Report. For further details of the additional responsibilities, refer to the Ring-fencing Certificate and the Risk and Compliance Statement.

Disclosure of information to auditor

The Directors who held office at the date of approval of this report confirm that:

- So far as they are each aware, there is no relevant audit information of which the Company's auditor is unaware
- Each Director has taken all the steps that they ought to have taken as a Director to make themselves aware of any relevant audit information and to establish that the Company's auditors are aware of the information.

Executive pay and performance

We are committed to transparent reporting within our Annual Reports as appropriate and in accordance with legal and regulatory requirements, including Ofwat's Board leadership, transparency and governance principles. This also includes a commitment to reporting any changes in policy and the underlying reasons.

Our Remuneration Committee determines our policy on remuneration of Executive Directors and Non-Executive Directors. Our Remuneration Committee Report within our Annual Report and Sustainability Report provides a description of the link between Directors' pay and standards of performance (as required by section 35A of the Water Industry Act 1991) and disclosures required under Regulatory Accounting Guidelines.

Our remuneration policy ensures that executive remuneration has a clear alignment to Thames Water's performance and long-term success, in the interests of customers. It is designed to be stretching and also provide sustained and long-term value creation for shareholders and other stakeholders.

Non-Executive Directors

The Chairman and Non-Executive Directors do not participate in any performance related arrangements (i.e. Annual Management Bonus ("AMB") or Long-Term Incentive plan ("LTIP")) and do not participate in the Thames Water pension plans. They are paid Directors' fees only.

Executive Directors

Executive Directors' remuneration includes a mix of fixed and variable pay comprising basic salary plus performance related incentives. Through the current AMB and LTIP arrangements, Executive Directors are entitled to receive remuneration linked to the achievement of performance measures. The Executive Directors made personal decisions to waive receipt of any payments that may have been due to them under the 2022/23 AMB and the 2020-23 LTIP.

As set out in section on the Directors' Remuneration Review, a new performance-related pay plan will be implemented for 2023/24. This increases the focus on performance outcomes for customers and the environment and reduces the weighting of measures associated with financial performance. It has been designed with the aim of delivering the sustained performance improvement that our customers and the environment deserve.

The 2022/23 Annual Management Bonus plan was based on safe people, customer service, customer and environmental delivery, and financial performance, over a performance period of one financial year and is paid in cash.

The 2020-23 LTIP outcomes were measured over a three-year period, with a focus on delivering critical elements of our stretching business plan which included the delivery of an overarching "Integrated Performance Assessment" measured using the Return on Regulated Equity ("RORE"). This assessment provided a measure of successful delivery for customer, the

environment and shareholders since it is impacted by all aspects of our business plan.

To provide increased focus on customer and the environment, the LTIP included additional elements targeting delivery of business plans for customer service, leakage, water quality and pollutions.

The 2020-23 LTIP award vests three years after the date of grant subject to the achievement of the performance conditions and is paid in cash.

In determining the outcome of the incentive schemes, standards of performance are assessed by the Thames Water Remuneration Committee to ascertain whether targets have been achieved. In addition, the Committee also considers relevant reports from Ofwat in assessing the achievement of standards of performance.

Dividend policy for the appointed business

TWUL's overall objective is to pay a progressive dividend commensurate with the long-term returns and performance of the business, after considering the business's current and expected regulatory and financial performance, regulatory restrictions, management of economic risks and debt covenants.

In assessing the dividend to be paid, the Directors are required to ensure that:

- Payment of a proposed dividend should not impair short term liquidity or compliance with the Company's covenants;
- Payment of a proposed dividend should not impair the longer-term ability to finance the Company's business, including access to both debt and equity capital;
- An assessment is made to determine if the payment of a dividend reflects the Company's performance against the final determination for AMP7 and its commitments to customers and other stakeholders;
- An assessment is made of the impact the payment of the dividend may have on its commitments and obligations to customers and other stakeholders as a supplier of essential services, which includes customer commitments, environmental commitments, community commitments, employees and pension members; and
- An assessment is made of the long-term financial resilience of the Company.

Regulatory considerations for the appointed business

Any dividends that are declared or paid will be adjusted both upwards and downwards relative to the Ofwat's 4% dividend yield guidance reflecting the company's performance in meeting its commitments and obligations to customers and other stakeholders.

If a gross dividend is declared above Ofwat's 4% dividend yield guidance, applied to Ofwat's notional company, the Board will consider whether the additional returns result from performance (including progress towards degearing) that has benefited customers and may therefore be reasonably applied to finance a dividend.

The Board has noted that Ofwat modified the dividend policy licence condition, with effect from 17 May 2023, such that Condition P of our instrument of appointment requires that an Appointee shall declare or pay dividends only in accordance with a dividend policy which has been approved by the Board of the Appointee and which complies with the following principles:

- that dividends declared or paid will not impair the ability of the Appointee to finance the Appointed Business, taking account of current and future investment needs and financial resilience over the longer term;
- that dividends declared or paid take account of service delivery for

customers and the environment over time, including performance levels, and other obligations;

- that dividends declared or paid reward efficiency and the effective management of risks to the Appointed Business.

Ofwat's dividend disclosure requirements are reflected in the regulatory accounting guidelines (RAG 3 – Guidelines for the format and disclosures for the annual performance report), which are updated from time to time. RAG 3 requires companies to provide sufficient explanation within the annual performance report such that a reader will understand the process undertaken by the Board in determining the appropriate level of dividend and the basis of their decisions.

It should be noted that Ofwat's updated dividend policy guidance came into effect after the Board made its decision relating to 2022/23 dividend payments and after such payments had been made. However, the Board believe that the Thames Water dividend policy already, in the round, has regard to Ofwat's requirements – albeit the Board will be reviewing the Thames Water dividend policy during the course of 2023/34 to ensure alignment.

2022/23 dividend payments

Our shareholders take seriously their commitments and obligations to customers and other stakeholders (including the environment, communities, employees and pension members) as a supplier of essential services. They also recognise the need to turnaround performance and the long-term nature of the Executive's plan to deliver this objective.

Our external shareholders did not receive a dividend in the 2022/23 financial year, the sixth consecutive year, underlining their commitment to re-investing cash flow into delivering improved performance for customers. Notwithstanding this, TWUL's overall objective is to pay a progressive dividend commensurate with the long-term returns and performance of the business, after considering the business's current and expected regulatory and financial performance, regulatory restrictions, management of economic risks and debt covenants.

The Board made an assessment, having regard to our updated dividend policy as to whether it was appropriate to make a dividend distribution to shareholders in 2022/23.

The key factors are set out below, with commentary that the Board considered when making this assessment.

Payment of a proposed dividend should not impair short term liquidity or compliance with our covenants

Based on our going concern assessment outlined in our Annual Report, we believe Thames Water has the ability pay a dividend whilst allowing the business to maintain sufficient liquidity and compliance with our covenants. This assessment took into account the £500 million of proceeds which shareholders committed to provide in March 2023 to enable Thames Water to deliver its business plan. This funding was received on 30 March 2023. However, in light of continued high levels of capital investment and high forecast levels of gearing, the Board concluded to not pay any dividends towards a dividend to our external shareholders, whilst paying a £45.2 million dividend in March 2023 to service the debt obligations of one of our holding companies, Kemble Water Finance Limited ("KWF"), and group related costs.

Payment of a proposed dividend should not impair the longer-term ability to finance the Company's business, including access to both debt and equity capital.

The payment of dividends to service the debt obligations of one of our holding companies, KWF, plays a key role in maintaining access to funds either via equity capital provided by shareholders and / or from raising incremental debt at KWF which is underpinned by lender and credit rating agency confidence. Consequently, there is

a risk that not paying a dividend could negatively impact planned refinancing activity, the Group's credit rating outlook and the capacity to raise incremental equity capital that is factored into TWUL's business plan to invest in the business, pay down debt and manage gearing covenant headroom.

Consequently, the Board concluded that it was both responsible and reasonable to approve a payment of dividends to service such debt obligations of KWF, and group related costs.

To help maintain long term financial resilience, the Board concluded not to pay dividends for any external distributions to shareholders throughout the year – the sixth consecutive year.

These decisions considered the Group's current capital structure and was consistent with its legal and regulatory obligations to ensure that TWUL is a financially resilient business with ready access to debt and equity capital.

An assessment is made to determine if the payment of a dividend reflects the Company's performance against the final determination for AMP7 and its commitments to customers and other stakeholders.

The Board assessed overall company performance in the round. In considering the company's performance against the final determination for AMP7 (and the Company's own business plan) the Board noted that overall performance in 2022/23 was short of expectations.

Overall operational performance in 2022/23 was significantly affected by the extreme drought in the summer of 2022 and a major freeze thaw event in December 2022. In addition, performance was undermined by a relatively small but significant number of large operational events which highlighted the underlying fragility of some of our assets and the need for investment to better manage the impact of climate change and population growth. The Board particularly noted that:

- Customer service remains poor, despite a c.28% reduction in complaints the Company remains in 17th place (of 17) in C-Mex in FY23. Performance was impacted by extreme weather
- The company missed key regulatory targets including those relating to leakage, supply interruptions, water quality, main repairs, internal sewer flooding and pollutions.
- The company met targets relating to unplanned outages, sewer collapses and priority services.

The Board further noted that environmental performance has deteriorated – reflecting challenging operational conditions due to adverse weather (including the summer drought and winter freeze-thaw events) – and CSO discharges are under public, regulatory and stakeholder scrutiny.

Overall the company delivered 26 of its 52 performance commitments and will therefore receive a net ODI penalty of £82.3 million this financial year (excluding C-Mex and D-Mex).

In light of the points above the Board therefore concluded to restrict dividends for external distributions to shareholders whilst maintaining some internal distributions having concluded that such internal distributions were in the overall interests of TWUL. Overall yield was 1.2%, significantly below the 4% Ofwat yield guidance reflecting the disappointing operational and financial performance.

An assessment is made of the impact that payment of the dividend may have on its commitments and obligations to customers and other stakeholders as a supplier of essential services, which includes customer commitments, environmental commitments, community commitments, employees and pension members.

The Board also considered the impact of dividend payments in the 2022/23 financial year on our 8-year turnaround plan, the revised business plan, and our commitments and obligations to customers and other stakeholders.

These plans have been designed to significantly improve Thames Water's operational performance, deliver on its regulatory obligations, improve river heath, increase resilience and deliver better outcomes for its customers, communities and the environment.

Limiting internal distributions in 2022/23 to £45.2 million, a yield materially below Ofwat's guidance of 4%, was considered unlikely to have a material impact on our commitments and obligations to customers and other stakeholders as a supplier of essential services.

Furthermore, the Board did not expect this dividend to have a material impact on employees and pension members. The Board noted that in 2020/21 financial year, an exceptional £69.7 million payment was made to the pension scheme relating to the deficit repayment plan during that year, which covered the remaining deficient payments agreed with the pension trustees for AMP7.

An assessment of the long-term financial resilience of the Company.

Based on our long term viability statement, outlined in our Annual Report, we believe Thames Water has the ability pay a dividend and this would not be expected to impair our long term viability.

The Board considered its credit ratings and ratings outlook, forecast compliance with debt covenants and long term liquidity forecasts. At the time of the dividend assessment, the Board noted that Moody's had assigned a Corporate Family Rating ("CFR") of Baa2 with stable outlook and S&P had assigned a BBB rating with stable outlook to Class A debt. It also noted increasing high levels of capital investment planned for the rest of the current AMP7 regulatory price control period.

To support delivery of our new business plan and increasing levels of investment, £500 million of funds were provided by shareholders in March 2023. The Executive team is working with shareholders on plans to provide a further £750 million of funding for the remainder of the current regulatory period, which will be subject to certain conditions, to drive Thames Water's turnaround over the remainder of the current regulatory period and establish a solid foundation for Thames Water's long term growth.

The Executive team will continue to reflect the ongoing turnaround in its next business plan for the five-year regulatory period starting in 2025. A focus of that business plan will be to maximise the likelihood that Thames Water receives a PR24 regulatory determination that supports the turnaround. As part of this, Thames Water shareholders acknowledge that further shareholder support may be required to improve financial resilience.

Considering the factors, the Board concluded to restrict dividends such that external shareholders did not receive a dividend, whilst enabling dividends for the servicing of debt obligations of KWF, and group related costs. Such dividends are not expected to impact on the Appointee's ability to deliver its turnaround plan and finance its functions.

Conclusion

Having regard to all the factors outlined above, the Board concluded that it was not appropriate to declare dividends to enable any external dividend to shareholders for 2022/23, the sixth year in succession.

In March 2023, £45.2 million of dividends were made to service the debt obligations of KWF, and group related costs The total interest paid by KWF in 2022/23 was £70.5 million, £42.4 million was funded by the dividend payment after taking into account £2.8 million retained at Thames Water Limited for group related costs, with the remainder paid from cash reserves within KWF.

The Board concluded that it was both reasonable and responsible to approve the payment of the dividends, which represent a yield of 1.2%, (materially below Ofwat's guidance) having regard to the Group's revised dividend policy, current capital

structure, and was consistent with its legal and regulatory obligations to ensure that Thames Water Utilities Limited is a financially resilient business with ready access to debt and equity capital.

Tax strategy

Our aim is to be clear and transparent over our approach to tax and our tax profile to ensure we're a responsible business. Our tax strategy is straightforward and underpinned by five key principles, which are unchanged from the previous year:

- We comply with all tax legislation at all times, both within the letter and spirit of the law;
- We do not use tax avoidance schemes or aggressive tax planning;
- We engage fully and transparently with HMRC and other Governmental bodies, and seek to resolve disputes in a co-operative manner;
- We adopt a conservative approach to tax risk management and apply a strong tax governance framework; and
- We accept only a low level of risk in relation to taxation.

You can find more detail on our tax strategy on our website at:

https://www.thameswater.co.uk/media-library/home/about-us/governance/our-policies/tax-strategy.pdf

Long-term Viability Statement

The assessment of our long-term viability can be found in our Annual Report and Sustainability Report. The Directors have conducted this assessment over a ten-year period to 31 March 2033, taking into account the Company's current position and principal risks. Based on this assessment, the Board has a reasonable expectation that the Company will be able to operate within its financial covenants, maintain an investment grade credit rating and maintain sufficient liquidity facilities to meet its funding needs over the assessment period, based on the underlying assumptions outlined in the assessment.

Innovation competition

Amounts have been collected from customers relating to an established industry wide innovation fund as disclosed in our table 9A.

In the current year Annual Report we have provided for the full value of funding we have collected from customers – recognising that we have an obligation to either deliver projects to this value or compensate other companies which win competition funding. In the Annual Performance Report these provisions are excluded in line with direction from Ofwat.

The funding we have collected has been ring-fenced within our accounting records and will only be used to deliver innovation competition projects, it will not fund business as usual activities or spend.

The total amount collected to date is £22.223 million, out of which we have paid out £10.500 million to MOSL (Market Operator Services Ltd). We have received funding from MOSL of £7.700 million during FY 22/23 out of which we have spent £1.200 million. The total amount held in 1C.11 cash balance relating to innovation fund is £18.123 million.

Infrastructure network reinforcement charges

Following clarification received from Ofwat as part of the PR24 Final Methodology, total network reinforcement reported in table 2J includes £8.0m of reclassified expenditure attributable to prior periods. As a result, our overall variance carried forwards has reduced to £12.3m as at 31 March 2023. The Company reviews its infrastructure charge rates annually and revisions are made as necessary to align to our long-term projection of network reinforcement expenditure.

Separately disclosed regulatory information

We've chosen to publish the regulatory tables 4B, 4L, 4M, 6F, 7B and 7F as a separate document to this Annual Performance Report due to the size of the tables.

These have been prepared in line with regulatory guidelines and follow the principles set out in this Annual Performance Report.

You can view these tables on our website.

Consolidated results

In completing all tables – we have included all debt relevant to the regulated company. Figures therefore include both Thames Water Utilities Limited ("TWUL") and its direct 100% owned financing subsidiary Thames Water Utilities Finance plc ("TWUF").

Transactions with associates and the non-appointed business

We have disclosed transactions with both associated companies and our non-appointed business in accordance with the guidance provided in RAG 5.07.

Although our appointed business applies International Financial Reporting Standards ("IFRS"), an associated company for the purposes of this disclosure is any company within the Group or a related company as defined by Financial Reporting Standard 102.

The following disclosures comply with RAG 3.14 (The Group means the group of companies headed by Kemble Water Holdings Limited, the ultimate parent company).

During the year there were no single contracts in excess of 0.5% (£11.1m) of the Company's appointed income with any subsidiary of the Kemble Group of companies or related companies.

The Company has also chosen to voluntarily disclose all transactions with companies for which there is a common Director. The Directors of the Company and their connection to other Group companies is shown on the Directors' interest table.

The dividend paid during 2022/23 to the parent company Thames Water Utilities Holdings Limited of £45.2m was used solely to service group debt obligations and minor working capital requirements.

Services provided to the Company by associated companies

	Company principal activity	Services provided	Turnover during 2022/23 in £000s	Terms of supply 2022/23	Value in £000s
Thames Water Property Services Limited	Property Company	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	196.1	No market – actual costs recharged	(235.8)
Thames Water Utilities Holdings Limited	Holding Company	Group relief	-	No market – actual cost	(30,397.1)
Dunelm Energy Limited	Management Consultant Company	Administrative services	-	Not recognised	(16.0)
Total value in £000s					(30,648.9)

Services provided by the Company and recharged to associated companies

Associate Company	Company principal activity	Services provided	Turnover during 2022/23 in £000s	Terms of supply 2022/23	Value in £000s
Thames Water Limited	Holding Company	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	-	No market – costs allocated by time	719.6
Kennet Properties Limited	Property Company	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	1,593.7	No market – costs allocated by time	52.2
Kennet Properties Limited	Property Company	Payroll costs	-	No market – costs allocated by time	40.1
Kemble Water Eurobond	Holding Company	Corporation tax group relief surrendered by regulated business	-	No market – actual costs	96,146.0
Kemble Water Eurobond	Holding Company	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	-	No market – costs allocated by time	34.7
Kemble Water Holdings	Holding Company	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	-	No market – costs allocated by time	915.3
Kemble Water Finance	Holding Company	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	-	No market – costs allocated by time	284.0
Thames Water Utilities Holdings Limited	Holding Company	Intercompany interest	-	No market – Negotiated	47,461.6
Thames Water Utilities Holdings Limited	Holding Company	Intercompany loan	-	No market – Negotiated	1,249,106.3
Thames Water Pension Trustees Limited	Pension Trustees	Support services	1,502.6	No market – costs allocated by time	331.3
Kemble Ventures Operations Limited	Shared Management Service	Payroll costs	-	No market – costs allocated by time	2,174.7
Kemble Ventures Operations Limited	Shared Management Service	Director costs, Financial Control, Treasury, Company Secretary and Tax support services	-	No market – costs allocated by time	81.5
Total value in £000s					1,397,347.3

Note that during the year the Group paid its immediate parent company, Thames Water Utilities Holdings Limited, a dividend of £45.2 million (2022: £37.1 million) in compliance with RAG 3.14

Payments to companies with common Directors

Company *(and service provided)*	Common Director	Terms of supply 2022/23	Value (£'000)
Cadent Gas Limited *Liquid and Gas Distribution services*	Perry Noble	Negotiated	123.6
Energy Networks Association Limited *Memberships & Subscriptions*	John Morea	Mandatory Fee	5.0
Omers Infrastructure Europe Limited *Plant upgrade*	Alastair Hall	Negotiated	192.0
SGN Commercial Services Ltd *Liquid and Gas Distribution services*	Michael McNicholas Guy Lambert Peter McCosker	Negotiated	4,817.5
Water UK *Memberships & Subscriptions*	Sarah Bentley	Mandatory Fee	788.1
Infinity Investment S.A. *Directors Fees*	Guy Lambert	Negotiated	39.6
Total in £000s			5,965.8

Note that the above table includes non-TWUL Directors. Also, independent Non-Executive Directors are not deemed to exercise control, as such they have not been included in the above analysis.

Directorships held in Group Companies

The Company discloses the following information as part of its compliance with RAG 5.07, listing those Directors of the Company who are also Directors of the following Group companies during the year ended 31 March 2023 and up to the date of signing this report:

Director	Thames Water Utilities Ltd	Thames Water Utilities Holdings Ltd	Thames Water Ltd	Kemble Water Finance Ltd	Kemble Water Eurobond Plc	Kemble Water Holdings Ltd
Sarah Bentley	R 27/06/23					
Alastair Cochran	✔					
Michael McNicholas	✔	R 23/03/23	R 23/03/23	R 23/03/23	R 23/03/23	R 23/03/23
John Morea	R 29/09/22					
Guy Lambert	A 29/09/22	R 01/12/22	R 01/12/22	R 01/12/22	R 01/12/22	R 01/12/22
John Holland-Kaye	A 01/04/23					
Ian Marchant	✔					
Nicholas Land	✔					
Catherine Lynn	✔					
Ian Pearson	✔					
Jill Shedden	✔					
Hannah Nixon	✔					
David Waboso	R 12/05/23					

R – resigned, A – appointed

Borrowings and loans

All borrowings from our wholly owned subsidiaries are disclosed in note 39 of our Annual Report and Sustainability Report. All loans to our wholly owned subsidiaries are disclosed in note 40 of the Annual Report.

Transfer of assets by or to the appointee

There were no transfers of assets or liabilities by or to our Company in excess of the materiality limit (2022: £Nil).

Guarantees or other forms of security by the appointee

The Company, as part of the Whole Business Securitisation ("WBS") capital structure, guarantees unconditionally and irrevocably all the borrowings and derivatives of Thames Water Utilities Finance plc.

Omissions of rights

There were no omissions of rights during the year (2022: none).

Waiver of any consideration, remuneration or other payment by the appointee

There were no waivers of any consideration, remuneration or other payments by the appointee during the year (2022: none).

Differences between statutory and RAG definitions

Adjustments are made to the statutory numbers to ensure compliance with the Ofwat guidance detailed in RAG 3.14 and 4.11.

The most significant include:

- Reclassification of current year bad debt from revenue to operating costs (£68.3m);
- Borrowing costs capitalised within fixed assets in the statutory accounts are recognised as interest expense for regulatory purposes (£215.2m). The associated depreciation of borrowing costs is recognised in operating costs (£9.3m); and,
- Reclassification of certain costs and incomes to align with regulatory presentation requirements.

Full reconciliations of the differences between statutory and regulatory figures for revenue, operating profit, other income, and profit before tax can be found in the section on Accounting Policies.

Non-appointed activities include revenue of £85.1m and operating costs of £0.7m relating to Bazalgette Tunnel Limited ("BTL"). BTL is an independent company unrelated to Thames Water Utilities Limited and was appointed in 2015 to construct the Thames Tideway Tunnel.

The arrangement with BTL means that the Company has included construction costs of the Thames Tideway Tunnel within its bills to wastewater customers during the year ended 31 March 2023. As cash is collected, these amounts are subsequently paid to BTL within a maximum of 50 business days under 'pay when paid' principle.

Accounting standards require the Group to present the amounts billed as revenue in our financial statements, and with an associated cost representing bad debt on amounts billed. This also gives rise to reporting profit which is taxable.

Non appointed activities also include our tankered waste and property searches businesses.

Interest analysis

1A.7	£m
Interest on external debt	-433.064
Interest on intra-group debt	-0.117
RPI accretion on debt	-460.884
Amortisation of debt issuance costs, premium and discounts	-10.770
Interest in relation to leases	-1.352
Trading interest expense	-0.062
Other financing costs	-2.388
Per 1A.7	-908.637

1A.8	£m
Net interest expense on defined benefit obligation	-6.700
Per 1A.8	-6.700

Section 1
Regulatory financial reporting

Table 1A: Income statement for the 12 months ended 31 March 2023

This table takes the information from the statutory income statement and shows the adjustments made in order to arrive at the regulatory income statement for the appointed business. The adjustments include both differences between the International Financial Reporting Standards and the Regulatory Accounting Guidelines and the removal of non-appointed income and costs.

Line description Units: £m	Statutory	Adjustments			Total appointed activities	RAG 4 Ref
		Differences between statutory and RAG definitions	Non-appointed	Total adjustments		
Revenue	2,265.205	65.382	104.450	-39.068	2,226.137	1A.1
Operating costs	-2,016.800	-31.236	-20.148	-11.088	-2,027.888	1A.2
Other operating income	107.559	-103.605	0.000	-103.605	3.954	1A.3
Operating profit	355.964	-69.459	84.302	-153.761	202.203	1A.4
Other income	0.000	87.883	1.031	86.852	86.852	1A.5
Interest income	223.700	0.000	0.000	0.000	223.700	1A.6
Interest expense	-700.158	-208.479	0.000	-208.479	-908.637	1A.7
Other interest expense	0.000	-6.700	0.000	-6.700	-6.700	1A.8
Profit/(loss) before tax and fair value movements	-120.494	-196.755	85.333	-282.088	-402.582	1A.9
Fair value gains/(losses) on financial instruments[52]	122.343	0.000	0.000	0.000	122.343	1A.10
Profit/(loss) before tax	1.849	-196.755	85.333	-282.088	-280.239	1A.11
UK corporation tax	91.157	0.000	-5.753	5.753	96.910	1A.12
Deferred tax	-123.053	0.000	0.015	-0.015	-123.068	1A.13
Profit/(loss) for the year	-30.047	-196.755	79.595	-276.350	-306.397	1A.14
Dividends	-45.200	0.000	0.000	0.000	-45.200	1A.15
Tax analysis						
Current year	-96.146	0.000	0.000	0.000	-96.146	1A.16
Adjustment in respect of prior years	4.989	0.000	5.753	-5.753	-0.764	1A.17
UK corporation tax	-91.157	0.000	5.753	-5.753	-96.910	1A.18
Analysis of non-appointed revenue						
Imported sludge			0.000			1A.19
Tankered waste			7.013			1A.20
Other non-appointed revenue			97.436			1A.21
Total non-appointed Revenue			104.449			1A.22

[52] *The amount includes the fair value of £717.4m accreted on index linked swaps during the year.*

Table 1B: Statement of comprehensive income for 12 months ended 31 March 2023

Line description Units: £m	Statutory	Adjustments			Total appointed activities	RAG 4 Ref
		Differences statutory and RAG	Non-appointed	Total adjustments		
Profit for the year	-30.047	-196.755	79.595	-276.350	-306.397	1B.1
Actuarial gains/(losses) on post-employment plans	69.400	0.000	0.000	0.000	69.400	1B.2
Other comprehensive income	0.285	0.000	0.000	0.000	0.285	1B.3
Total Comprehensive income for the year	39.638	-196.755	79.595	-276.350	-236.712	1B.4

The statement of comprehensive income shows all of the changes to our statement of financial position reserves from the statutory accounts, adjusting for the differences between IFRS and the RAGs as well as excluding the results of the non-appointed business.

Table 1C: Statement of financial position for the 12 months ended 31 March 2023

Line description Units: £m	Statutory	Adjustments			Total appointed activities	RAG 4 Ref
		Differences statutory and RAG s	Non-appointed	Total adjustments		
Non-current assets						
Fixed assets	18,059.234	-933.952	5.822	-939.774	17,119.460	1C.1
Intangible assets	263.272	-8.483	0.000	-8.483	254.789	1C.2
Investments - loans to group companies	1,249.106	0.000	0.000	0.000	1,249.106	1C.3
Investments - other	442.443	0.000	377.979	-377.979	64.464	1C.4
Financial instruments	417.232	-122.148	0.000	-122.148	295.084	1C.5
Retirement benefit assets	6.000	0.000	0.000	0.000	6.000	1C.6
Total non-current assets	20,437.287	-1,064.583	383.801	-1,448.384	18,988.903	1C.7
Current assets						
Inventories	20.893	0.000	0.000	0.000	20.893	1C.8
Trade & other receivables	758.317	0.000	4.731	-4.731	753.586	1C.9
Financial instruments	31.864	-33.161	0.000	-33.161	-1.297	1C.10
Cash & cash equivalents	1,836.306	0.000	6.990	-6.990	1,829.316	1C.11
Total current assets	2,647.380	-33.161	11.721	-44.882	2,602.498	1C.12

Line description Units: £m	Statutory	Adjustments			Total appointed activities	RAG 4 Ref
		Differences statutory and RAG s	Non-appointed	Total adjustments		
Current liabilities						
Trade & other payables	-951.259	62.315	-12.082	74.397	-876.862	1C.13
Capex creditor	0.000	-241.063	0.000	-241.063	-241.063	1C.14
Borrowings	-2,287.831	148.699	0.000	148.699	-2,139.132	1C.15
Financial instruments	-67.090	68.615	0.000	68.615	1.525	1C.16
Current tax liabilities	0.000	0.000	0.000	0.000	0.000	1C.17
Provisions	-35.001	-5.670	0.000	-5.670	-40.671	1C.18
Total current liabilities	-3,341.181	32.896	-12.082	44.978	-3,296.203	1C.19
Net Current assets/(liabilities)	-693.801	-0.265	-0.361	0.096	-693.705	1C.20
Non-current liabilities						
Trade & other payables	-921.630	940.300	0.000	940.300	18.670	1C.21
Borrowings	-13,507.061	-797.701	0.000	-797.701	-14,304.762	1C.22
Financial instruments	-1,924.757	890.600	0.000	890.600	-1,034.157	1C.23
Retirement benefit obligations	-182.000	0.000	0.000	0.000	-182.000	1C.24
Provisions	-192.700	12.152	0.000	12.152	-180.548	1C.25
Deferred income – grants & contributions	0.000	-545.965	0.000	-545.965	-545.965	1C.26
Deferred income - adopted assets	0.000	-365.085	0.000	-365.085	-365.085	1C.27
Preference share capital	0.000	0.000	0.000	0.000	0.000	1C.28
Deferred tax	-1,190.239	0.000	0.042	-0.042	-1,190.281	1C.29
Total non-current liabilities	-17,918.387	134.301	0.042	134.259	-17,784.128	1C.30
Net assets	1,825.099	-930.547	383.482	-1,314.029	511.070	1C.31
Equity						
Called up share capital	29.000	0.000	0.000	0.000	29.000	1C.32
Retained earnings & other reserves	1,796.099	-930.547	383.482	-1,314.029	482.070	1C.33
Total Equity	1,825.099	-930.547	383.482	-1,314.029	511.070	1C.34

Explanation of reconciling items:

Adjustments are made to the statutory numbers to ensure compliance with the Ofwat guidance detailed in RAG 3.14 and 4.11. The most significant include:

- Capitalised interest of £984.9m for borrowing costs is removed from fixed assets, offset by a £42.4m adjustment to write back depreciation on capitalised borrowing costs;
- Capital creditors of £241.1m are disclosed separately;

- A reclassification is made from current borrowings of £182.7m to trade and other payables in respect of accrued interest.
- A reclassification is made from financial instruments to non-current borrowings due to derivative financial liabilities (see below reconciliation); and,
- The non-appointed business shows retained earnings of £390.3m relating to BTL.

Borrowings reconciliation

Appointed Activities (£m)	
Current liabilities	
Current borrowings included in statutory accounts	2,280.533
Difference between statutory and regulatory definitions:	
Lease Liability	7.298
Accretion moved to borrowings from financial instruments	53.392
Accrued interest taken to trade and other payables	-182.693
FX loss moved to borrowings from financial instruments	-19.398
Current borrowings included in regulatory accounts (per Table 1C)	2,139.132
Non-current liabilities	
Non-current borrowings included in statutory accounts	13,457.362
Difference between statutory and regulatory definitions:	
Lease Liability	49.699
Accretion moved to borrowings from financial instruments	873.057
FX loss moved to borrowings from financial instruments	-75.356
Non-current borrowings included in regulatory accounts (per Table 1C)	14,304.762
Total borrowings included in statutory accounts	15,737.895
Total borrowings included in regulatory accounts (per Table 1C)	16,443.894
Add: Unamortised debt issuance costs, discount and IFRS 9 transition adjustment	61.819
Total borrowings included in regulatory accounts (Table 1E)	16,505.713

Table 1D: Statement of cashflows for 12 months ended 31 March 2023

Line description Units: £m	Statutory	Adjustments			Total appointed activities	RAG 4 Ref
		Differences statutory and RAG	Non-appointed	Total adjustments		
Operating activities						
Operating profit	355.964	-69.459	84.302	-153.761	202.203	1D.1
Other income	0.000	87.883	1.031	86.852	86.852	1D.2
Depreciation	712.000	-9.318	0.000	-9.318	702.682	1D.3
Amortisation – Grants & contributions	0.000	0.000	0.000	0.000	0.000	1D.4
Changes in working capital	9.067	0.000	-83.514	83.514	92.581	1D.5
Pension contributions	-6.530	6.701	0.000	6.701	0.171	1D.6
Movement in provisions	42.700	-9.107	0.000	-9.107	33.593	1D.7
Profit on sale of fixed assets	3.000	0.000	0.000	0.000	3.000	1D.8
Cash generated from operations	1,116.201	6.700	1.819	4.881	1,121.082	1D.9
Net interest paid	26.500	-221.879	0.000	-221.879	-195.379	1D.10
Tax paid	0.000	0.000	0.000	0.000	0.000	1D.11
Net cash generated from operating activities	1,142.701	-215.179	1.819	-216.998	925.703	1D.12
Investing activities						
Capital expenditure	-1,598.400	215.179	0.000	215.179	-1,383.221	1D.13
Grants & Contributions	0.000	0.000	0.000	0.000	0.000	1D.14
Disposal of fixed assets	-7.000	0.000	0.000	0.000	-7.000	1D.15
Other	0.000	0.000	0.000	0.000	0.000	1D.16
Net cash used in investing activities	-1,605.400	215.179	0.000	215.179	-1,390.221	1D.17
Net cash generated before financing activities	-462.70	0	1.819	-1.819	-464.518	1D.18
Cashflows from financing activities						
Equity dividends paid	-45.2	0	0	0.000	-45.200	1D.19
Net loans received	1,919.20	0	0	0.000	1,919.200	1D.20
Cash inflow from equity financing	0	0	0	0.000	0.000	1D.21
Net cash generated from financing activities	1,874.000	0.000	0.000	0.000	1,874.000	1D.22
Increase (decrease) in net cash	1,411.301	0.000	1.819	-1.819	1,409.482	1D.23

Differences between statutory and RAG definitions

This table takes the information from the statement of cashflows from the statutory accounts and adjusts for the differences between IFRS and the RAGs as well as removing the cash flows of the non-appointed business to show the cash flows of our regulated business.

Explanation of reconciling items

- The cash flow has been prepared to align with the regulatory reporting format. As a result, the net cash position by activity (operating, investing and financing) does not agree to what has been presented in the statutory statement of cash flows;
- The difference is primarily due to the classification of all interest related balances including amounts capitalised in the statutory statement of financial position to the 'Net interest paid' category and interest costs relating to pensions; and
- Majority of movement in non-appointed working capital relates to cash paid over to BTL.

Table 1E: Net debt analysis (appointed activities) at 31 March 2023

Line description	Units	Fixed rate	Floating rate	Index linked		Total	RAG 4 Ref
				RPI	CPI /CPIH		
Borrowings (excluding preference shares)	£m	6,407.547	586.011	9,512.069	0.086	16,505.713	1E.1
Preference share capital	£m	0.000				0.000	1E.2
Total borrowings	£m	6,407.547	586.011	9,512.069	0.086	16,505.713	1E.3
Cash	£m					-5.119	1E.4
Short term deposits	£m					-1,824.197	1E.5
Net Debt	£m					14,676.397	1E.6
Gearing	%					77.468%	1E.7
Adjusted Gearing	%					77.403%	1E.8
Full year equivalent nominal interest cost	£m	251.899	38.072	1,489.825	0.001	1,779.797	1E.9
Full year equivalent cash interest payment	£m	251.899	38.072	94.327	-0.007	384.291	1E.10
Indicative weighted average nominal interest rate	%	3.931%	6.497%	15.662%	1.163%	10.783%	1E.11
Indicative weighted average cash interest rate	%	3.931%	6.497%	0.992%	-8.140%	2.328%	1E.12
Weighted average years to maturity	nr	8.991	3.528	23.443	0.377	12.168	1E.13

Notes for net debt analysis

- Instruments which change from fixed to floating during their life have been classified according to their interest rate characteristics as at 31 March 2023.
- The weighted average years to maturity is calculated as the multiple of the principal sum and years to maturity for each non-swap instrument (foreign currency debt incorporates the impact of cross currency swaps in line with Table 4B) divided by the principal sum outstanding as at 31 March according to RAG 4.11 Guideline.
- Adjusted gearing is the percentage of the Net debt (covenant basis) to the RCV. It is the measure used when assessing TWUL Group's gearing against the level stipulated in the whole business securitisation covenants.

Table 1F: Financial flows for the 12 months ended 31 March 2023 and for the price review to date

(2017-18 financial year average CPIH)

The tables show the various components of actual returns achieved for the current financial year and the average for AMP7 to date. The actual return has been benchmarked against the allowed return permitted under the regulatory regime.

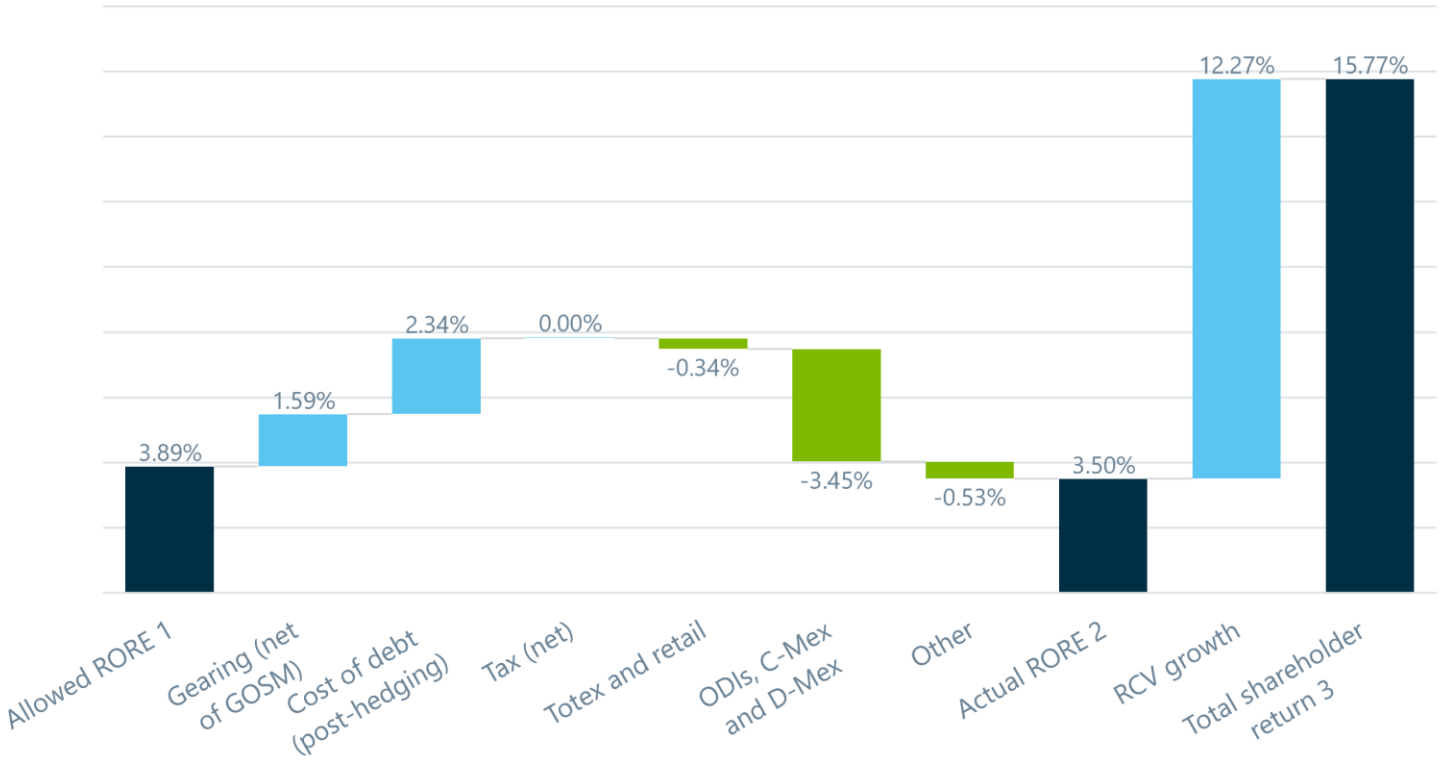
All figures quoted are in 2017/18 real CPIH terms unless otherwise stated. Due to rounding, numbers presented may not add up precisely to the totals provided.

		12 months ended 31 March 2023						Average 2020-25						
Line description		Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	RAG 4 Ref
Regulatory equity	£m	6,140.748	6,140.748	3,166.257				5,878.500	5,878.500	2,760.908				1F.1
Return on regulatory equity	%	3.89%	2.00%	3.89%	238.733	123.094	123.094	3.90%	1.83%	3.90%	229.262	107.675	107.675	1F.2
Impact of movement from notional gearing	%		1.88%	1.59%		115.639	50.422		2.07%	1.54%		121.586	48.883	1F.3
Gearing benefits sharing	%		0.00%	0.00%		0.000	0.000		0.00%	0.00%		0.000	0.000	1F.4
Variance in corporation tax	%		0.00%	0.00%		0.000	0.000		-0.06%	-0.11%		-3.455	-3.455	1F.5
Group relief	%		0.00%	0.00%		0.000	0.000		0.00%	0.00%		0.000	0.000	1F.6
Cost of debt	%		6.64%	17.00%		407.740	538.275		2.46%	6.29%		151.092	199.306	1F.7
Hedging instruments	%		-5.73%	-14.66%		-351.648	-464.226		-2.20%	-5.62%		-135.261	-178.007	1F.8
Return on regulatory equity including Financing adjustments	%	3.89%	4.80%	7.82%	238.733	294.825	247.565	3.90%	4.10%	6.01%	229.262	241.637	174.353	1F.9
Operational Performance														
Totex out / (under) performance	%		0.71%	1.38%		43.750	43.750		0.09%	0.17%		5.383	5.383	1F.10
ODI out / (under) performance	%		-1.50%	-2.91%		-92.190	-92.190		-0.88%	-1.71%		-54.071	-54.071	1F.11
C-Mex out / (under) performance	%		-0.26%	-0.51%		-16.032	-16.032		-0.18%	-0.34%		-10.897	-10.897	1F.12
D-Mex out / (under) performance	%		-0.02%	-0.04%		-1.125	-1.125		-0.02%	-0.03%		-0.995	-0.995	1F.13

Line description		12 months ended 31 March 2023				Average 2020-25								RAG 4 Ref
		Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	Notional returns and notional regulatory equity	Actual returns and notional regulatory equity	Actual returns and actual regulatory equity	
Retail out / (under) performance	%		-0.89%	-1.72%		-54.537	-54.537		-0.94%	-1.82%		-57.479	-57.479	1F.14
Other exceptional items	%		-0.27%	-0.53%		-16.714	-16.714		-0.28%	-0.55%		-17.261	-17.261	1F.15
Operational performance total	%		-2.23%	-4.32%		-136.849	-136.849		-2.20%	-4.27%		-135.320	-135.320	1F.16
RoRE (return on regulatory equity)	%	3.89%	2.57%	3.50%	238.733	157.976	110.716	3.90%	1.90%	1.73%	229.262	106.317	39.033	1F.17
RCV growth	%	12.27%	12.27%	12.27%	753.470	753.470	388.500	6.90%	6.90%	6.90%	405.617	405.617	190.503	1F.18
Voluntary sharing arrangements	%		0.00%	0.00%		0.000	0.000		0.00%	0.00%		0.000	0.000	1F.19
Total shareholder return	%	16.16%	14.84%	15.77%	992.203	911.446	499.216	10.80%	8.80%	8.63%	634.878	511.933	229.535	1F.20
Dividends														
Gross Dividend	%	1.79%	0.62%	1.21%	109.919	38.285	38.285	2.90%	0.51%	1.09%	170.477	30.229	30.229	1F.21
Interest Receivable on Intercompany loans	%		0.65%	1.27%		40.200	40.200		0.34%	0.73%		20.113	20.113	1F.22
Retained Value	%	14.37%	13.56%	13.29%	882.284	832.961	420.731	7.90%	7.94%	6.81%	464.402	461.591	179.193	1F.23
Cash impact of 2015-20 performance adjustments														
Totex out / under performance	%		-0.30%	-0.58%		-18.490	-18.490		-0.21%	-0.45%		-12.288	-12.288	1F.24
ODI out / under performance	%		-0.02%	-0.03%		-1.094	-1.094		-0.30%	-0.63%		-17.478	-17.478	1F.25
Total out / under performance	%		-0.32%	-0.62%		-19.584	-19.584		-0.51%	-1.08%		-29.766	-29.766	1F.26

Notes for table 1F

Breakdown of 2022/23 actual return



1. *Based on notional capital structure.*
2. *Based on actual capital structure.*
3. *The Company does not have any voluntary sharing arrangements for AMP7.*

The tables show the various components of actual returns achieved for the current financial year and the average for AMP7 to date. The actual return has been benchmarked against the allowed return permitted under the regulatory regime.

All figures quoted are in 2017/18 real CPIH terms unless otherwise stated.
Due to rounding, numbers presented may not add up precisely to the totals provided.

- 1F7: Calculated as the total cost of debt excluding hedging. 1F8 is calculated as the hedging impact, which now includes accretion on index-linked swaps. For consistency, the AMP to date average figures reflect restated FY21 and FY22 values which include the impact of accretion
- 1F10: In line with Ofwat guidance, unspent conditional allowance has been removed from this calculation. This has also been applied to FY21 and FY22 for calculating the average.
- 1F.19: Thames Water does not have any voluntary sharing arrangements for AMP7
- 1F.22: Relates to the interest income receivable by TWUL on the loans due from its immediate parent company, TWUHL. In 2022/23, no dividends were paid by TWUL to fund the interest payable by TWUHL. Cash interest payment of £55.7m was made to TWUL by TWUHL during 2022/23. For further details see note 13 of our Annual Report and Sustainability Report.

Our revenues are set according to a very detailed regulatory process which allows for the recovery of efficient costs plus a return for investors in the business. The purpose of financial flows is to provide greater transparency about the financial returns to our shareholders. The financial flows information allows a comparison between the returns under our actual capital structure and the returns set by the regulator under a notional capital structure which is 60% geared.

The total actual return to external shareholders is generally comprised of the base return set in the FD, outturn financial and operational performance compared to our allowances and targets, any retrospective adjustment set in the FD to reflect actual performance over 2015 to 2020, growth in the RCV arising from inflation and any voluntary sharing arrangements.

Overall total shareholder returns amount to 15.77% for 2022/23. 13.29 percentage points were retained in the business, with 1.21% being distributed to cover debt financing costs elsewhere in the group and the remaining 1.27% relating to interest income is due to TWUL from its immediate holding company, TWUHL.

Note that no dividends were paid out to TWUHL to fund this interest income to TWUL. Furthermore, for completeness, no dividends were paid by any group companies to our external shareholders. Please see the dividend policy section for further detail.

The actual RORE to shareholders of 3.50% is based on our actual capital structure and can be calculated by taking the allowed RORE (based on notional capital structure) and adjusting for the above financial and operational performance which amount to 7.82% and -4.32% respectively.

A breakdown of these components is set out in further detail below:

- For 2022/23, the FD has set our base return at 3.89% applicable to Ofwat's notional capital structure with a gearing of 60%;
- Our financing activities increased returns by 7.82% and can be attributed to the following elements:
  - Our cost of debt (unadjusted for hedging instruments) was lower than the allowance set by the FD, in real terms. This is shown in row 1F.7. This is mainly because c.39% of our debt is fixed in nominal terms, which provides the benefit of lower interest expense in a high inflation environment.
  - The observed outperformance observed in row 1F.7 is largely offset when adjusting for hedging instruments, as shown in 1F.8. This is driven by the significant swap accretion incurred during the year (arising from inflation), offset slightly by swap income.
  - It is noted that reporting guidance was updated in FY23 to explicitly require companies to show the impact of swap accretion in 1F.8. In previous years this amount was disclosed in a footnote but not included in the 1F.8 calculations.
  - Given the materiality of this change, for consistency the AMP7 Average to date has been re-calculated so that FY21 and FY22 also include the impact of swap accretion. As a result, the average combined cost of debt performance (the sum of 1F7 and 1F8) for the AMP to date is 0.67%.
  - The impact of hedging instruments presented in Table 1F is consistent with financial derivatives set out in Table 4B which includes various inflation linked swaps and interest rate swaps. Note that the cost of debt (unadjusted for

hedging instruments) includes the impact of cross currency swaps

- Our average gearing of 79.21% during the financial year is lower than in FY22 which is higher than the 60% assumed by Ofwat for a notional company. The higher gearing amplifies the percentage return to external shareholder, because debt has a lower required return than equity on a notional basis. Another impact of higher gearing levels is that it increases the volatility of external shareholder returns, which become proportionately more sensitive to levels of out- or under-performance. We are responsible for financing our business as efficiently as possible. Our financing structure, the Whole of Business Securitisation, offers additional protections to debt investors enabling us to have higher levels of debt than would otherwise be the case without reducing our creditworthiness. These investor protections place clear limits on permitted operational and financing activities undertaken by the Company and also protect customers' interests. All additional risk associated with having a higher level of debt remains with our external shareholders and is not transferred to customers.
- In AMP7, Ofwat introduced a Gearing Outperformance Sharing Mechanism ("GOSM") which has the effect of sharing the impact of higher gearing on returns with customers. As with FY22, for FY23 our outturn cost of debt, calculated under Ofwat's methodology, exceeded the allowed cost of equity in nominal terms. This was due to the significantly higher rate of outturn inflation than forecast under the FD. A positive value was therefore calculated based on the Ofwat GOSM mechanism.
- A value of 0 has been recorded in the table for FY23 in line with Ofwat's guidance for population of this table. It is noted that the mechanism as defined in the Ofwat Gearing Outperformance Sharing model results in a positive value of £45.1million. This would be equivalent to an additional 1.42% of return not reflected in this table based on the actual structure.
- The cumulative impact of the Gearing Outperformance Sharing Mechanism for AMP7 to date is now in a net-reward position, due to positive outturns for both FY22 and FY23. In line with Ofwat guidance, a value of zero has therefore been recorded. Absent this guidance to offset the positive impact for the purpose of this table, an additional 0.23% of return would have been recognised.
- There was no impact from the overall net tax performance during the year.

- Our operational performance decreased returns for the financial year by 4.32% which is due to various factors:
  - We outperformed our wholesale totex largely due to the timing of our expenditure in water networks and water resources.
  - The impact of un-utilised conditional allowances has been removed from the calculation. As of FY23, £26.002m of the £284.158m AMP-to-Date conditional allowances have been spent. We expect these to materially ramp up over the remaining years of AMP7 in line with the timings agreed with Ofwat under our gateway reviews.
  - Taking into account these adjustments, totex performance remained positive and increased returns by 1.38%
  - Retail spend remains above our allowance as we continue to invest in service improvement. As this additional spend is not shared with customers, this

reduced returns by 1.72%. On a net basis after customer sharing, the impact of wholesale totex and retail spend reduced returns by 0.34%;

- Over the remainder of AMP7 we continue to plan to spend materially above the levels set under our FD as we continue to strive to improve our customer service which would materially reduce actual RORE versus allowed RORE, all else being equal;
- The business has incurred material ODI penalties of £92.190m as we under-performed overall against the challenging targets set by the FD, particularly in relation to mains repairs, water quality compliance, and water supply interruptions. This reduced returns by 2.91%;
- Whilst we have seen ongoing improvements, we continue to see underperformance on customer measures, C-MeX and D-MeX. There was an overall penalty amount of £17.2m which has reduced returns by 0.54%
- Other exceptional items relate to land sales, pollution fines and customer compensation claims. Refer to Table 2L for further details of land sales.

- Inflation, namely the average yearly growth in CPIH, increases RCV growth by 12.27%;
- We do not have any voluntary sharing arrangements for AMP7; and
- The 2015-20 adjustment reflects the true-ups under the FD for the total out-/under-performance in AMP6 for totex and ODIs, which are reflected in our allowed revenues for AMP7. The reduction of 0.62% is predominantly driven by the leakage rebate levied as a result of our leakage under-performance in AMP6.

Average return for AMP7 (2020/21 to 2022/23)

Our average RORE for AMP7 to date is 1.73% compared to the allowed RORE of 3.89%, with financing outperformance offset by operational performance.

Accounting policies

Basis of preparation

Our disclosures in this Annual Performance Report have been prepared on a going concern basis and in accordance with the Regulatory Accounting Guidelines ("RAGs") issued by Ofwat, which are based on IFRS as adopted by the UK Endorsement Board, as applied in our Annual Report and clarified within the Ofwat query process.

The following are key differences between Regulatory Accounting Guidelines and accounting policies reported in our Annual Report, these are explained further in the policy notes:

- Reclassification of certain costs and incomes to align with regulatory presentation requirements.
- Revenue recognition (IFRS 15) in relation to bad debts; and
- Capitalisation of borrowing costs (IAS 23).

Revenue recognition

Revenue represents income receivable from regulated water and wastewater activities. For regulatory reporting purposes, Ofwat requires a deviation from IFRS15 whereby revenue for amounts billed and deemed uncollectable in the current year are recognised within operating costs in the Annual Performance Report (instead of a direct reduction to revenue as required by IFRS15).

The difference between the amount recorded as revenue in the statutory accounts and the amount recorded as revenue in the regulatory accounts was £65.382m for the year ended 31 March 2023, as shown in the below table.

The differences between revenue reported in the Annual Report and the Annual Performance Report (Table 1A) can be summarised as follows:

	£m
Statutory revenue	2,265.205
Bad debt reclassified to opex	68.307
Reclassification of sludge cake sales to opex	-0.808
Reclassification of grants & contributions to other income	-2.117
Non appointed income	-104.450
Appointed revenue	2,226.137

Revenue includes an estimate of the amount of water and wastewater charges unbilled at the year end. This accrual is estimated using a defined methodology based on a measure of unbilled water consumed by tariff, calculated from historical billing information. There are no material changes to the methodology applied in the current period.

Price control segments

Price controls relate to specific products and services which we provide to customers. The following price controls are applicable during the financial year:

- Water network plus: transport and storage of raw water, treatment and distribution of water to our customers through our water network;
- Wastewater network plus: our sewer network, treatment of sewage and treatment of sludge liquors;
- Water resources: abstracting raw water;
- Bioresources: the transport, treatment and disposal of sludge;

- Retail Household: provides certain customer-facing activities including billing and revenue collection for household customers;
- Retail Non-Household: On 1 April 2017, we transferred our non-household customers to Castle Water Limited, and ceased to act as non-household retailer, however we continue to recognise wholesale revenue from these customers via third-party non-household retailers.
- Thames Tideway Tunnel: responsible for the construction of interface works to the Thames Tideway Tunnel.

We allocate all costs either directly or indirectly in accordance with 'RAG2.09 – Guideline for classification of costs across the price controls'. The full details of how costs have been allocated is within our Accounting Methodology Statement which can be found on our website

There are no significant changes in our allocation methodology in the current period.

Financial information within our finance system (SAP) is recorded by expenditure type within specific cost centres. Where possible, operating costs are attributed at the lowest level within the cost centre hierarchy i.e., the relevant process level appropriate to the type of cost and price control. However, certain costs are recorded at a higher level in the cost centre hierarchy where they do not specifically relate to a process or if the cost is a support related cost.

We use a cloud-based business modelling and planning application (SAP Analytics Cloud) to produce the operating expenditure component of our regulatory tables. SAP remains the primary financial accounting and management tool used by the business and is the source of the data used in SAP Analytics Cloud.

Where possible, capital expenditure and associated depreciation are directly attributed to one of the price controls. Where this is not possible, as an asset is used by more than one of the price controls, the capital expenditure and depreciation are reported in the price control where the service of principal use occurs with a recharge for use, equivalent to depreciation, being made to the other price controls reflecting the proportion of the asset used by them.

Occupied household properties policy

An occupier is any person who owns a premises or who has agreed with the Company to pay water and sewerage services in respect of the premises. No bills are raised in the name of "the occupier", other than in the circumstances outlined in the 'Unoccupied properties policy' section below. The property management process is followed to identify whether the property is occupied or not. The property management process consists of the following:

- Mailings;
- Customer contacts;
- Meter reading for metered properties;
- Land registry checks; and
- Credit reference agency data.

Unoccupied household properties policy

Revenue is not recognised in respect of unoccupied properties. Properties are classified as unoccupied when:

- A new property has been connected but is unoccupied and unfurnished;
- We have been informed that the customer has left the property;
- It is unfurnished and not expected to be reoccupied immediately;
- It has been disconnected following a customer request;
- The identity of the customer is unknown; and
- We have been informed that the customer is in a care home, in long term hospitalisation, in prison or overseas long-term.

The Company only raises bills in the name of the 'occupier' when it has evidence that a property is occupied but cannot confirm the name of the occupier. When the Company identifies the occupant, the bill is cancelled and re-billed in the customer's name. If the Company has not identified an occupant within six months the bill is cancelled, and the property is classified as empty.

When a property is classified as unoccupied, a defined process is followed to verify when the property becomes occupied and/or obtain the name of the customer in order to initiate billing. The residency confirmation process comprises a number of steps which include using external and internal information for desk-top research to confirm the property status (occupied/empty) and, where possible, to identify the occupier's name.

The property will only cease to be classified as unoccupied when a named customer is identified and billed.

The Company does not recognise income in respect of empty properties. If the Company has turned off the supply of water at the mains to a property at a customer's request, then water supply charges are not payable.

A customer may request the supply to be turned off in instances such as the property is to be demolished or where a house previously converted into flats (and additional supplies made) is to be converted back into a house.

If the occupier's name is not obtained at this point, the property will remain classified as unoccupied, and the residency confirmation process will be re-started after one to six months. If these steps confirm that a property appears to be empty, then the supply may be turned off.

The following activities are undertaken to check properties classified as unoccupied are in fact not occupied:

- Where the customer has left a property and it is expected to be occupied by someone else, a welcome letter is sent to the property explaining to the occupier how to register as the new account holder;
- Where there is no response to the welcome letter within two months a further letter is sent to the property explaining that the property has been classified as void and may be scheduled for disconnection as a result;
- Meter readings are taken for metered unoccupied properties and where consumption is recorded a letter is sent to the property; and
- Inspections are organised throughout the year to check for occupancy status.

New household properties

All new properties are metered. Charges accrue from the date at which the meter is installed. The developer is billed between the date of connection and first occupancy, and this is recognised as revenue.

If the developer is no longer responsible for the property and no new occupier has been identified, the property management process referred to above is followed to identify the new occupier. Until the new occupier has been identified the property is treated as unoccupied and is not billed.

Household disconnections policy

Premises listed in Schedule 4A of the Water Industry Act 1991 (e.g. any dwelling occupied by a person as his or her only or principal home) cannot be disconnected for non-payment of charges. However, the following provisions do apply in respect of any disconnections:

- If the water supply to any premises is disconnected for any reason, but we continue to provide sewerage services to those premises, the customer will be charged the appropriate Sewerage Unmeasured Tariff unless it can be demonstrated that the premises will be unoccupied for the period that the premises are disconnected, in which case there is no charge. Revenue is recognised for sewerage services up to the point we are aware the property becomes unoccupied;
- If it is found subsequently that the premises were occupied for any period when we were advised that the premises would be unoccupied, the appropriate Sewerage Unmeasured Tariff will then apply to that period and appropriate retrospective bills are raised, and revenue recognised at that point; and
- In the event that we suspect that a property is occupied but we have no record of the occupier, we take steps to establish the identity of the occupier in order that billing can commence, and revenue be recognised. Occupier is defined to include any person who owns premises as set out in the 'Occupied properties policy' above and also any person who has agreed with us to pay water supply and/or sewerage charges in respect of any premises (e.g. a Bulk Meter Agreement).

Metered sales accrual ("MSA") reconciliation: Retrospective review of household measured income accrual

Appointed income for the year ended 31 March 2022 included a measured income accrual of £197.8m. The value of billing subsequently recognised in the year ended 31 March 2023 for consumption in the prior year was £198.7m (total of £200.7m less £2.0m still in accrual). This has resulted in an increase in the current year's revenue due to the under-estimation of the prior year's measured income accrual:

MSA	£m	£m	Unwind	£m	£m
System Accrual - Main	177.564		Billed	173.600	
System Accrual - WS/WH	(3.112)		Still in accrual	2.048	
Active to Empty			Empty to Active	5.823	
System Accrual		174.452			181.471
Excluded (Capped at 2 yrs)	10.991				
Excluded Provision	(2.198)				
Excluded Provision	(1.626)				
Excluded		7.167	Excluded		16.434
New Accounts		1.815	New Accounts		0.635
Management Judgement		13.030			
Subtotal		196.464	Subtotal		198.540
Re-registered in Household		1.325	Re-registered in Household		1.665
			Customer switching from unmeasured to metered		0.562
Total Accrual		197.789			200.767

Bad debt

The Group applies the IFRS9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables, contract assets and insurance claims receivable. The Group's assessment for calculating expected credit losses is explained below. In addition, management has considered the ongoing cost of living challenges, and has increased the provision to reflect the expected adverse impact on customers' ability to pay their water and wastewater bills.

During the year ended 31 March 2023, we have seen an increase in our overall bad debt cost. The increase is primarily due to a reduction in cash collection rates and increase in cancel / rebill recoverability provision. Our total bad debt charge equates to 3.9% (31 March 2022: 3.0%) of total gross revenue.

Capitalisation

The regulatory accounts policy on Property, Plant and Equipment ("PP&E") follows the statutory accounting policies with the exception of borrowing costs. No changes have been made to this policy since the prior reporting period.

In the statutory accounts, borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the associated asset. All other borrowing costs are included as finance expenses within the income statement.

For regulatory reporting purposes borrowing costs may not be capitalised. The regulatory approach, which differs from IAS 23, results in an additional £215.2m being recognised in interest expense and £9.3m decrease in depreciation within the regulatory accounts for 2022/23.

Directly billed

A bad debt model is used to calculate the provision for directly billed customers. This uses performance in the year to determine the level of provision required. The model takes the closing receivables balance and then deducts the amounts that are expected to be collected or cancelled based on performance in the year.

The amount that remains will be uncollectable and therefore needs to be covered by a bad debt provision. Debt that is older than 4 years is fully provided for. There are also provisions to cover billing that is cancelled and not rebilled and also the collectability of any rebilling and a bad debt provision against unbilled debtors i.e., debts that have not been billed yet but are part of the metered sales accrual.

Using the output of the model together with management's judgement of expected performance in the future, a management judgement is formed regarding the level of provision required for future credit losses

Directly Billed Write Off Policy

Our bad debt write-off policy has remained unchanged and has been consistently applied in the current year. Debt is only written off after all available economic options for collecting the debt have been exhausted and the debt has been deemed to be uncollectable. This may be because the debt is impossible, impractical, inefficient or uneconomic to collect.

Situations where this may arise and where debt may be written off are as follows:

- Where the customer has absconded without paying and strategies to trace their whereabouts and collect outstanding monies have been fully exhausted;
- Where the customer has died without leaving an estate or has left an insufficient estate on which to levy execution;

- Where the value of the debt makes it uneconomic to pursue – all debts of less than £5 are written off;
- Where the age of the debt exceeds the statute of limitations – all debts of greater than 6 years old are written off, taking into account usual business rules;
- Where county court proceedings and attempts to recover the debt-by-debt collection agencies (multiple in some cases) have proved unsuccessful including where the customer does not have any assets/has insufficient assets on which to levy execution; and
- Where the customer has been declared bankrupt, is in liquidation or is subject to insolvency proceedings or a debt relief order and no dividend has been or is likely to be received.

For debt to be written off there must be a legitimate charge against the debtor and no reasonable expectation of recovery. Disclosure is made for information regarding financial assets that are written off but are still subject to enforcement activity.

Water Only Companies

A provision is also made against debts held by WOCs who bill their customers for sewerage services on behalf of the Group. Since detailed information about the debt held on our behalf by the WOCs is limited, we use an average of two data points when calculating the provisions – WOC Statutory Accounts and TW directly billed ("DB") provision rates - taking a single data point is not appropriate as collection rates, write-off and provisioning policies, differ from company to company.

Where provision rates have been provided by the WOCs this has been used as it accurately reflects the provision required to cover future write-offs. In addition, Management has considered the impact of cost of living increases and has created a provision to reflect the expected adverse impact on customers' ability to pay their water and wastewater bills.

BTL

The arrangement with BTL means the Group has included construction costs of the Thames Tideway Tunnel within its bills to wastewater customers. As cash is collected, these amounts are subsequently paid to BTL. This arrangement gives rise to the recognition of revenue within the Group and associated bad debt.

The bad debt methodology is consistent with directly billed customers.

Non-Household

The Group has assessed the risk of credit losses for non-household customers to be low and therefore no bad debt provision has been made.

Appointed profit before tax reconciliation

Operating profit:	£m
Statutory operating profit	355.964
Reclassification of grants and contributions to other income	-79.820
Reclassification of rental income to other income	-7.343
Capitalised borrowings depreciation	9.318
Derecognition of innovation fund provision	9.105
Reclassification of capital income to other income	-0.720
Non appointed	-84.302
Appointed operating profit	202.202
Other income:	
Statutory other income	0.000
Reclassification of grants and contributions to other income	79.820
Reclassification of rental income to other income	7.343
Reclassification of capital income to other income	0.720
Non appointed	-1.031
Appointed other income	86.852
Profit before tax:	
Statutory profit before tax	1.849
Capitalised borrowings	-205.861
Derecognition of innovation fund provision	9.107
Non appointed	-85.336
Regulatory profit before tax	-280.241

Current tax reconciliation 2022/23

Line description Units: £m	Total	Non-appointed	Appointed
Profit / (loss) before tax and fair value movements	(120.494)	85.333	(205.827)
Differences between statutory and regulatory definitions - mainly interest not shown as capitalised	(196.757)	-	(196.757)
Profit/(loss) on ordinary activities before taxation as shown for regulatory purposes	(317.251)	85.333	(402.584)
Tax at 19%	(60.278)	16.213	(76.491)
Charge / (Credit) effects of:			
Depreciation on assets that do not qualify for relief	4.743	-	4.743
Disallowable expenditure [53]	5.112	-	5.112

[53] *Disallowable expenditure primarily relates to fines included in operating expenses.*

Line description Units: £m	Total	Non-appointed	Appointed
Profit / (loss) before tax and fair value movements	(120.494)	85.333	(205.827)
Non-taxable income [54]	(7.641)	-	(7.641)
Property disposals	0.195	-	0.195
Capital allowances including "super deductions", for the year lower than depreciation[55]	82.232	0.011	82.221
Capitalised borrowing costs allowable for tax [56]	(40.884)	-	(40.884)
Losses / (profits) on financial derivatives [57]	(159.341)	-	(159.341)
Pension cost charge (lower than)/ in excess of pension contributions	0.019	-	0.019
Other short term timing differences	(5.028)	-	(5.028)
Tax losses carried forward[58]	24.096	-	24.096
Differences between statutory and regulatory definitions - mainly capitalised interest	37.384	-	37.384
Differences between statutory and regulatory definitions - Fair value gains/(losses) on financial instruments[59]	23.245	-	23.245
	(96.146)	16.224	(112.370)
Group relief not paid at standard rate[60]	-	(16.224)	16.224
Charge/(credit) in respect of group relief for the year	(96.146)	-	(96.146)
Adjustments in respect of prior periods – group relief	4.989	5.753	(0.764)
Total current tax charge/(credit) on profit/(loss) on ordinary activities	(91.157)	5.753	(96.910)
Current tax for current year	-96.146		
Current tax for prior year	4.989		
Total current tax	-91.157		

[54] Non-taxable income relates primarily to income from new service connections. This income is reflected in the accounts as non-taxable income under IFRS principles, while the cost of the new service connections fixed assets is not eligible for capital allowances.

[55] In the current year, capital allowances claimed were lower than depreciation in order to minimise tax losses arising in year.

[56] Capitalised borrowing costs are eligible for a full tax deduction in the year.

[57] Accounting fair value profits and losses arising on our derivatives are predominantly non-taxable and non-deductible respectively, as instead they are usually taxed as the cash flows arise. Deferred tax is provided on all temporary differences.

[58] This year, the Group has a tax loss, most of which will be sold as group relief to group companies at the standard rate of corporation tax of 19%, resulting in a current tax credit. Some tax losses are being carried forward for use against future taxable profits; this reduces the current tax credit recognised in the year at 19%, and instead a deferred tax asset has been recognised at 25% on the losses carried forward (see Note 20 in the statutory accounts).

[59] Fair value gains on financial instruments of £122.343m are booked in the statutory accounts but are not included in "Profit/(loss) on ordinary activities before taxation as shown for regulatory purposes" above.

[60] The appointed business is sharing tax losses worth £16.224m with the non-appointed business, for which no payment is made, as both are within the same company.

Tax charged in the income statement Units £m	Total	Non-appointed	Appointed
UK Corporation tax charge/(credit)	-91.157	5.753	-96.910
Deferred tax charge/(credit) including impact of tax rate change	123.053	-0.015	123.068
Tax charge/(credit) on profit on ordinary activities	31.896	5.738	26.158

Reconciliation to total current tax charge allowed in price limits Units: £m	Appointed
Current tax charge allowed in price limits	0.000
Charge(credit) in respect of group relief for the year	-96.146
Credit in respect of group relief for prior years	-0.764
Total current tax charge/ (credit) on profit on ordinary activities	-96.910

The group relief credit of £91.157m comprises a tax credit of £96.910m for the appointed business less a charge of £5.753m being a prior year adjustment arising in the non-appointed business.

The tax credit of £96.910m in the appointed business comprises £96.146m in respect of tax losses to be provisionally sold to group companies as group relief for the current year, at the standard rate of tax, and a prior year credit of £0.764m.

Section 2
Price review and other segmental reporting

Table 2A: Segmental income statement for the 12 months ended 31 March 2023

This table provides information of our appointed business split by the price control units defined by Ofwat.

Further information regarding performance by price control units can be found in table 2C (retail cost analysis), 4D and 4E (wholesale totex) and our Accounting Methodology Statement on our website.

Line description Units: £m	Residential retail	Business retail	Water resources	Water Network+	Wastewater Network+	Bio-resources	TTT	Total	RAG 4 Ref
Revenue - price control	129.888	1.270	97.996	878.059	855.046	182.742	58.793	2,203.794	2A.1
Revenue - non price control	0.000	0.000	0.000	12.802	9.541	0.000	0.000	22.343	2A.2
Operating expenditure - excluding PU recharge impact	-187.528	0.000	-77.279	-495.551	-487.510	-70.189	-6.429	-1,324.486	2A.3
PU opex recharge	-4.508	0.000	-0.845	-10.156	12.404	3.105	0.000	0.000	2A.4
Operating expenditure - including PU recharge impact	-192.036	0.000	-78.124	-505.707	-475.106	-67.084	-6.429	-1,324.486	2A.5
Depreciation - tangible fixed assets	-3.833	0.000	-8.013	-335.448	-212.675	-77.075	-2.647	-639.691	2A.6
Amortisation - intangible fixed assets	-19.639	0.000	-0.374	-8.822	-34.512	-0.364	0.000	-63.711	2A.7
Other operating income	6.828	0.000	-0.103	-0.784	-1.416	-0.232	-0.339	3.954	2A.8
Operating profit	-78.792	1.270	11.382	40.100	140.878	37.987	49.378	202.203	2A.9
Surface water drainage rebates									
Surface water drainage rebates								2.914	2A.10

Table 2B: Totex analysis for the 12 months ended 31 March 2023 – wholesale

This table shows the breakdown of the wholesale totex expenditure from table 2A into the wholesale price control units and cost categories required to be reported on by Ofwat.

Line description Units: £m	Water resources	Water Network+	Wastewater Network+	Bio-resources	TTT	Total	RAG 4 Ref
Base operating expenditure							
Power	26.120	84.128	128.865	-12.588	0.000	226.525	2B.1
Income treated as negative expenditure	-0.250	0.107	-0.015	-18.493	0.000	-18.651	2B.2
Service charges/ discharge consents	23.579	0.000	5.322	1.550	0.000	30.451	2B.3
Bulk Supply/Bulk discharge	4.894	0.000	2.966	0.000	0.000	7.860	2B.4
Renewals expensed in year (Infrastructure)	0.000	94.160	75.192	0.000	0.000	169.352	2B.5
Renewals expensed in year (Non-Infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	2B.6
Other operating expenditure (including location specific costs & obligations)	18.547	245.463	214.307	96.116	6.429	580.862	2B.7
Local authority and Cumulo rates	3.324	68.000	43.670	0.499	0.000	115.493	2B.8
Total base operating expenditure	76.214	491.858	470.307	67.084	6.429	1,111.892	2B.9
Other operating expenditure							
Enhancement operating expenditure	1.910	8.198	2.619	0.000	0.000	12.727	2B.10
Developer services operating expenditure	0.000	5.651	2.180	0.000	0.000	7.831	2B.11
Total operating expenditure excluding third party services	78.124	505.707	475.106	67.084	6.429	1,132.450	2B.12
Third party services	0.000	0.000	0.000	0.000	0.000	0.000	2B.13
Total operating expenditure	78.124	505.707	475.106	67.084	6.429	1,132.450	2B.14
Grants and contributions							
Grants and contributions - operating expenditure	0.000	0.608	2.225	0.000	0.000	2.833	2B.15
Capital expenditure							
Base capital expenditure	17.213	446.928	352.505	91.859	1.923	910.428	2B.16

Line description Units: £m	Water resources	Water Network+	Wastewater Network+	Bio-resources	TTT	Total	RAG 4 Ref
Enhancement capital expenditure	18.599	154.245	199.104	9.442	32.619[61]	414.009	2B.17
Developer services capital expenditure	0.000	69.688	23.312	0.000	0.000	93.000	2B.18
Total gross capital expenditure excluding third party services	35.812	670.861	574.921	101.301	34.542	1,417.437	2B.19
Third party services	0.000	0.000	0.000	0.000	0.000	0.000	2B.20
Total gross capital expenditure	35.812	670.861	574.921	101.301	34.542	1,417.437	2B.21
Grants and contributions							
Grants and contributions - capital expenditure	0.000	48.422	40.820	0.000	0.000	89.242	2B.22
Net totex	113.936	1,127.538	1,006.982	168.385	40.971	2,457.812	2B.23
Cash expenditure							
Pension deficit recovery payments	0.000	0.000	0.000	0.000	0.000	0.000	2B.24
Other cash items	0.000	0.000	0.000	0.000	0.000	0.000	2B.25
Totex including cash items	113.936	1,127.538	1,006.982	168.385	40.971	2,457.812	2B.26

[61] *There is a difference of £48m between TTT capex reported in table 2D and 2B due to the capitalisation of investment property impairment cost.*

Table 2C: Cost analysis for the 12 months ended 31 March 2023 – retail

This table breaks down the retail operating costs included in table 2A into the cost categories required to be reported on by Ofwat.

Line description Units: £m	Residential	Business	Total	RAG 4 Ref
Operating expenditure				
Customer services	70.333	0.000	70.333	2C.1
Debt management	18.229	0.000	18.229	2C.2
Doubtful debts	89.731	0.000	89.731	2C.3
Meter reading	7.482	0.000	7.482	2C.4
Services to developers		0.000	0.000	2C.5
Other operating expenditure	1.356	0.000	1.356	2C.6
Local authority and Cumulo rates	0.397	0.000	0.397	2C.7
Total operating expenditure excluding third party services	187.528	0.000	187.528	2C.8
Depreciation				
Depreciation (tangible fixed assets) on assets existing at 31 March 2015	0.143	0.000	0.143	2C.9
Depreciation (tangible fixed assets) on assets acquired after 1 April 2015	3.690	0.000	3.690	2C.10
Amortisation (intangible fixed assets) on assets existing at 31 March 2015	0.000	0.000	0.000	2C.11
Amortisation (intangible fixed assets) on assets acquired after 1 April 2015	19.639	0.000	19.639	2C.12
Recharges				
Recharge from wholesale for legacy assets principally used by wholesale (assets existing at 31 March 2015)	0.000	0.000	0.000	2C.13
Income from wholesale for legacy assets principally used by retail (assets existing at 31 March 2015)	0.000	0.000	0.000	2C.14
Recharge from wholesale assets acquired after 1 April 2015 principally used by wholesale	4.508	0.000	4.508	2C.15
Income from wholesale assets acquired after 1 April 2015 principally used by retail	0.000	0.000	0.000	2C.16
Net recharges costs	4.508	0.000	4.508	2C.17
Total retail costs excluding third party and pension deficit repair costs	215.508	0.000	215.508	2C.18
Third party services operating expenditure	0.000	0.000	0.000	2C.19
Pension deficit repair costs	0.000	0.000	0.000	2C.20
Total retail costs including third party and pension deficit repair costs	215.508	0.000	215.508	2C.21
Debt written off				
Debt written off	79.241	0.000	79.241	2C.22
Capital expenditure				
Capital expenditure	11.006	0.000	11.006	2C.23

Line description Units: £m	Residential	Business	Total	RAG 4 Ref
Other operating expenditure includes the net retail expenditure for the following household retail activities which are part funded by wholesale				
Demand-side water efficiency - gross expenditure	2.958			2C.24
Demand-side water efficiency - expenditure funded by wholesale	2.958			2C.25
Demand-side water efficiency - net retail expenditure	0.000			2C.26
Customer-side leak repairs - gross expenditure	7.055			2C.27
Customer-side leak repairs - expenditure funded by wholesale	7.055			2C.28
Customer-side leak repairs - net retail expenditure	0.000			2C.29
Comparison of actual and allowed expenditure				
Cumulative actual retail expenditure to reporting year end	594.357			2C.30
Cumulative allowed expenditure to reporting year end	467.400			2C.31
Total allowed expenditure 2020-25	837.844			2C.32

Total operating costs for retail household was £215.5m in 2022/23. This is £45m higher than the allowed residential expenditure in the FD; and £25m higher than 2021/22.

2022/23 expenditure increase is mainly driven by increased doubtful debt charge which is as a result of lower debt collection rates (driven by macro headwinds like: increase in cost of living and inflation) and increased cancel rebill recoverability provision for unmeasured customers.

We saw some efficiencies in customer service, debt management and meter reading costs as a result of reduced customer complaints, efficient internal restructure and continuous rollout of smart meters respectively.

Household customer figures in region have increased from 5.5 million in 2021/22 to 5.7 million in current year.

Thames Water exited the Non household Retail market at Market Opening in April 2017.

Table 2D: Historic cost analysis of tangible fixed assets at 31 March 2023

This table shows the changes in the fixed assets across our price control units. Our accounting policies with relation to fixed assets and depreciation are set out in full in our Annual Report. The net book value includes £2,275.9m in respect of assets in the course of construction.

Line description Units: £m	Residential Retail	Business Retail	Water resources	Water Network+	Wastewater Network+	Bio-resources	TTT [62]	Total	RAG 4 ref
Cost									
At 1 April 2022	111.379	0	369.464	11,164.830	9,084.675	1,725.931	1,260.432	23,716.711	2D.1
Disposals	0	0	-0.039	-1.339	-1.365	-0.087	0	-2.830	2D.2
Additions	0.207	0	35.525	666.637	548.824	94.655	34.557	1,380.405	2D.3
Adjustments	-0.514	0	-11.366	13.014	22.248	-32.856	-0.466	-9.940	2D.4
Assets adopted at nil cost	0	0	0	24.631	54.461	0	0	79.092	2D.5
At 31 March 2023	111.072	0	393.584	11,867.773	9,708.843	1,787.643	1,294.523	25,163.438	2D.6
Depreciation									
At 1 April 2022	-83.302	0	-82.908	-3,493.613	-2,931.363	-798.927	-11.664	-7,401.777	2D.7
Disposals	0	0	0.013	0.838	0.478	0.126	0	1.455	2D.8
Adjustments	2.575	0	0.279	-2.126	-2.873	-4.461	2.677	-3.929	2D.9
Charge for year	-3.833	0	-8.013	-335.448	-212.675	-77.075	-2.647	-639.691	2D.10
At 31 March 2023	-84.560	0	-90.629	-3,830.349	-3,146.433	-880.337	-11.634	-8,043.942	2D.11
Net book amount at 31 March 2023	26.512	0.000	302.955	8,037.424	6,562.410	907.306	1,282.889	17,119.496	2D.12
Net book amount at 1 April 2022	28.077	0.000	286.556	7,671.217	6,153.312	927.004	1,248.768	16,314.934	2D.13
Depreciation charge for year									
Principal services	-3.833	0.000	-8.013	-334.824	-212.528	-77.075	-2.647	-638.920	2D.14
Third party services	0.000	0.000	0.000	-0.623	-0.146	0.000	0.000	-0.769	2D.15
Total	-3.833	0.000	-8.013	-335.447	-212.674	-77.075	-2.647	-639.689	2D.16

[62] *An amount of £50m relating to an Investment property is included in the gross cost within the TTT column.*

Table 2E: Analysis of 'grants and contributions' for the 12 months ended 31 March 2023 – water resources, water network+ and wastewater network+

This table shows information on capital contributions made by organisations and the related cost of assets constructed.

Line description Units: £m	Fully recognised in income statement	Capitalised and amortised (in income statement)	Fully netted off capex	Total	RAG 4 Ref
Grants and contributions - water resources					
Diversions - s185	0.000	0.000	0.000	0.000	2E.1
Other contributions (price control)	0.000	0.000	0.000	0.000	2E.2
Price control grants and contributions	0.000	0.000	0.000	0.000	2E.3
Diversions - NRSWA	0.000	0.000	0.000	0.000	2E.4
Diversions - other non-price control	0.000	0.000	0.000	0.000	2E.5
Other contributions (non-price control)	0.000	0.000	0.000	0.000	2E.6
Total grants and contributions	0.000	0.000	0.000	0.000	2E.7
Value of adopted assets	0.000	0.000		0.000	2E.8
Grants and contributions - water network+					
Connection charges	17.731	0.000	0.000	17.731	2E.9
Infrastructure charge receipts – new connections	0.000	11.521	0.000	11.521	2E.10
Requisitioned mains	4.769	0.000	0.000	4.769	2E.11
Diversions - s185	2.515	0.000	0.000	2.515	2E.12
Other contributions (price control)	0.000	0.000	0.000	0.000	2E.13
Price control grants and contributions before deduction of income offset	25.015	11.521	0.000	36.536	2E.14
Income offset	0.000	2.956	0.000	2.956	2E.15
Price control grants and contributions after deduction of income offset	25.015	8.565	0.000	33.580	2E.16
Diversions - NRSWA	1.340	0.000	0.000	1.340	2E.17
Diversions - other non-price control	3.195	0.000	0.000	3.195	2E.18
Other contributions (non-price control)	10.894	0.044	0.000	10.938	2E.19
Total grants and contributions	40.444	8.609	0.000	49.053	2E.20
Value of adopted assets	0.000	24.533	0.000	24.533	2E.21
Grants and contributions - wastewater network+					
Receipts for on-site work	0.361	0.000	0.000	0.361	2E.22
Infrastructure charge receipts – new connections	0.000	13.390	0.000	13.390	2E.23
Diversions - s185	0.368	0.000	0.000	0.368	2E.24
Other contributions (price control)	1.839	0.000	0.000	1.839	2E.25

Line description Units: £m	Fully recognised in income statement	Capitalised and amortised (in income statement)	Fully netted off capex	Total	RAG 4 Ref
Price control grants and contributions before deduction of income offset	2.568	13.390	0.000	15.958	2E.26
Income offset	0.000	0.512	0.000	0.512	2E.27
Price control grants and contributions after deduction of income offset	2.568	12.878	0.000	15.446	2E.28
Diversions - NRSWA	0.296	0.000	0.000	0.296	2E.29
Diversions - other non-price control	11.999	0.000	0.000	11.999	2E.30
Other Contributions (non-price control)	14.264	1.040	0.000	15.304	2E.31
Total grants and contributions	29.127	13.918	0.000	43.045	2E.32
Value of adopted assets	0.000	53.739	0.000	53.739	2E.33
Movements in capitalised grants and contributions					
b/f	0.000	204.839	329.726	534.565	2E.34
Capitalised in year	0.000	8.609	13.918	22.527	2E.35
Amortisation (in income statement)	0.000	-3.064	-2.399	-5.463	2E.36
c/f	0.000	210.384	341.245	551.629	2E.37

Table 2F: Residential retail for the 12 months ended 31 March 2023

This table shows an analysis of household retail revenues and customer numbers by customer type.

Line description	Revenue £m	Number of customers 000s	Average residential revenues £	RAG 4 Ref
Residential revenue				
Wholesale revenue	1,671.024			2F.1
Retail revenue	129.888			2F.2
Total residential revenue	1,800.912			2F.3
Retail revenue				
Revenue Recovered ('RR')	129.888			2F.4
Revenue sacrifice	0.000			2F.5
Actual revenue (net)	129.888			2F.6
Customer information				
Actual customers ('AC')		5,711.124		2F.7
Reforecast customers		5,728.954		2F.8
Adjustment				
Allowed revenue ('R)	122.469			2F.9
Net adjustment	-7.419			2F.10
Other residential information				
Average household retail revenue per customer			22.743	2F.11

Table 2G: Non-household water - revenues by tariff type

This table is only applicable for Welsh companies and therefore have not been included within this report.

Table 2H: Non-household wastewater - revenues by tariff type

This table is only applicable for Welsh companies and therefore have not been included within this report.

Table 2I: Revenue analysis for the 12 months ended 31 March 2023

This table shows an analysis of revenue across our price control units split by revenue streams.

Line description Units: £m	Household	Non-household	Total	Water resources	Water network+	Total	RAG 4 Ref
Wholesale charge – water							
Unmeasured	400.104	7.116	407.220	40.885	366.334	407.219	2I.1
Measured	367.622	201.061	568.683	57.096	511.588	568.684	2I.2
Third party revenue	0.000	0.152	0.152	0.015	0.137	0.152	2I.3
Total wholesale water revenue	767.726	208.329	976.055	97.996	878.059	976.055	2I.4
Wholesale charge – wastewater							
Unmeasured - foul charges	295.560	6.721	302.281	249.053	53.228	302.281	2I.5
Unmeasured - surface water charges	56.157	1.214	57.371	47.269	10.102	57.371	2I.6
Unmeasured - highway drainage charges	34.706	0.744	35.450	29.207	6.242	35.449	2I.7
Measured - foul charges	338.967	147.516	486.483	400.820	85.664	486.484	2I.8
Measured - surface water charges	79.475	15.322	94.797	78.104	16.693	94.797	2I.9
Measured - highway drainage charges	49.950	10.314	60.264	49.652	10.612	60.264	2I.10
Third party revenue	0.000	1.142	1.142	0.941	0.201	1.142	2I.11
Total wholesale wastewater revenue	854.815	182.973	1,037.788	855.046	182.742	1,037.788	2I.12
Wholesale charge – TTT							
Unmeasured	21.917	0.492	22.409				2I.13
Measured	26.566	9.818	36.384				2I.14
Total wholesale TTT revenue	48.483	10.310	58.793				2I.15
Wholesale Total	1,671.024	401.612	2,072.636				2I.16
Retail revenue							
Unmeasured	40.672	1.270	41.942				2I.17
Measured	89.216	0.000	89.216				2I.18
Retail third party revenue	0.000	0.000	0.000				2I.19
Total retail revenue	129.888	1.270	131.158				2I.20
Third party revenue - non-price control							
Bulk supplies water			8.524				2I.21
Bulk supplies wastewater			2.722				2I.22
Other third-party revenue - non price control			10.737				2I.23
Principal services - non-price control							
Other appointed revenue			0.360				2I.24
Total appointed revenue			2,226.137				2I.25

Table 2J: Infrastructure network reinforcement costs for the 12 months ended 31 March 2023

This table presents the infrastructure reinforcement costs, as included in totex in tables 4D and 4E by type of system or facility.

Line description Units: £m	Network reinforcement capex	On site / site specific capex	RAG 4 Ref
Wholesale water network+ (treated water distribution)			
Distribution and trunk mains	16.077	0.000	2J.1
Pumping and storage facilities	0.359	0.000	2J.2
Other	0.000	0.000	2J.3
Total	16.436	0.000	2J.4
Wholesale wastewater network+ (sewage collection)			
Foul and combined systems	5.549	0.000	2J.5
Surface water only systems	0.000	0.000	2J.6
Pumping and storage facilities	6.650	0.000	2J.7
Other	0.000	0.000	2J.8
Total	12.199	0.000	2J.9

Table 2K: Infrastructure charges reconciliation for the 12 months ended 31 March 2023

This table compares the revenue and costs of infrastructure charges for new connections.

Line description Units: £m	Water	Wastewater	Total	RAG 4 Ref
Infrastructure charges	11.956	14.777	26.733	2K.1
Discounts applied to infrastructure charges	0.000	0.000	0.000	2K.2
Gross Infrastructure charges	11.956	14.777	26.733	2K.3
Variance brought forward	-2.875	17.104	14.229	2K.4
Revenue	11.956	14.777	26.733	2K.5
Costs	-16.436	-12.199	-28.635	2K.6
Variance carried forward	-7.355	19.682	12.327	2K.7

Disclosed as infrastructure charges within the above table are contributions from other sources that are considered to be their equivalent, though are disclosed on separate lines within Table 2E. This includes the non-domestic Network Charges at a value of £1.083m.

Additionally, disclosed as infrastructure charges within the above table are the non-domestic Network Charges from the prior year at a value of £0.7m. These were excluded from the prior year and hence have been included as a catch-up adjustment to ensure that the calculation of the cumulative value in this table is consistent with previous years methods.

For the 2022/23 financial year we began offering an environmental discount scheme to incentivise more sustainable housing. However, we consider this scheme to be part of balance of charges principle replacing our previous income offset mechanism. It is not considered when setting our infrastructure charges. As such we have not deducted it from gross infrastructure charges in the table above. Instead, this has been presented within the Income Offset in Table 2E (line 2.15 & 2.27).

Table 2L: Analysis of land sales for the 12 months ended 31 March 2023

This table shows information on income received through the sale of land

Line description Units: £m	Water resources	Water Network+	Wastewater Network+	TTT	Total	RAG 4 Ref
Land sales – proceeds from disposals of protected land	0.000	0.000	0.006	0.000	0.006	2L.1

There was a disposal of 1 parcel of land during the year which was below the threshold for reporting to Ofwat.

Table 2M: Revenue reconciliation for the 12 months ended 31 March 2023 – wholesale

This table shows the retail price control difference between the actual revenue recovered and the revenue assumed at the final determination.

Line description Units: £m	Water resources	Water network+	Wastewater network+	Bio-resources	TTT	Total	RAG 4 Ref
Revenue recognised							
Wholesale revenue governed by price control	97.996	878.059	855.046	182.742	58.793	2,072.636	2M.1
Grants & contributions (price control)	0.000	33.580	15.446	0.000	0.000	49.026	2M.2
Total revenue governed by wholesale price control	97.996	911.639	870.492	182.742	58.793	2,121.662	2M.3
Calculation of the revenue cap							
Allowed wholesale revenue before adjustments (or modified by CMA)	98.560	878.987	837.916	176.297	57.541	2,049.301	2M.4
Allowed grants & contributions before adjustments (or modified by CMA)	0.000	40.886	18.317	0.000	0.000	59.203	2M.5
Revenue adjustment	1.413	19.455	36.143	7.467	2.547	67.025	2M.6
Other adjustments	0.000	0.000	0.000	0.000	0.000	0.000	2M.7
Revenue cap	99.973	939.328	892.376	183.764	60.088	2,175.529	2M.8
Calculation of the revenue imbalance							
Revenue cap	99.973	939.328	892.376	183.764	60.088	2,175.529	2M.9
Revenue Recovered	97.996	911.639	870.492	182.742	58.793	2,121.662	2M.10
Revenue imbalance	1.977	27.689	21.884	1.022	1.295	53.867	2M.11

Wholesale revenue for 2022/23 of £2,121.7m is £53.9m (2.5%) lower than the amount allowed in Ofwat's in-period outcome delivery incentives final determinations.

Wholesale water revenue is £29.7m (2.9%) and wholesale wastewater revenue (including the Company's delivered element of the Thames Tideway Tunnel) is £24.2m (2.1%) lower than the allowance. The causes of the lower revenue in both cases are:

- lower core tariff revenue from household customers, as a result of metered consumption being lower than originally anticipated; and
- lower than forecast capital contributions from connection and infrastructure charge revenue due to cost-of-living pressures reducing activity levels in the house building industry.

This is offset to some extent by higher core tariff revenue from wholesale non-household customers, due to higher than anticipated levels of consumption as businesses increased activity levels as the recovery from the pandemic continued.

The unrecovered revenue in 2022/23 attributable to variances in our customer base between outturn and the forecasts used when tariffs were set will be recovered from customers during the 2024/25 charging year under Ofwat's Revenue Forecasting Incentive ("RFI") mechanism.

Table 2N: Residential retail – social tariffs

This table shows the social tariffs and other forms of assistance we provide to improve affordability and accessibility for vulnerable customers.

Line description	Revenue £m	Number of customers 000s	Average amount per customer £	RAG 4 Ref
Number of residential customers on social tariffs				
Residential water only social tariffs customers		0.660		2N.1
Residential wastewater only social tariffs customers		84.789		2N.2
Residential dual service social tariffs customers		202.573		2N.3
Number of residential customers not on social tariffs				
Residential water only no social tariffs customers		49.763		2N.4
Residential wastewater only no social tariffs customers		1,963.059		2N.5
Residential dual service no social tariffs customers		3,445.023		2N.6
Social tariff discount				
Average discount per water only social tariffs customer			72.727	2N.7
Average discount per wastewater only social tariffs customer			99.482	2N.8
Average discount per dual service social tariffs customer			210.808	2N.9
Social tariff cross-subsidy - residential customers				
Total customer funded cross-subsidies for water only social tariffs customers	0.048			2N.10
Total customer funded cross-subsidies for wastewater only social tariffs customers	8.435			2N.11
Total customer funded cross-subsidies for dual service social tariffs customers	42.704			2N.12
Average customer funded cross-subsidy per water only social tariffs customer			0.952	2N.13
Average customer funded cross-subsidy per wastewater only social tariffs customer			4.119	2N.14
Average customer funded cross-subsidy per dual service social tariffs customer			11.707	2N.15
Social tariff cross-subsidy – company				
Total revenue forgone by company to fund cross-subsidies for water only social tariffs customers	0.000			2N.16
Total revenue forgone by company to fund cross-subsidies for wastewater only social tariffs customers	0.000			2N.17
Total revenue forgone by company to fund cross-subsidies for dual service social tariffs customers	0.000			2N.18
Average revenue forgone by company to fund cross-subsidy per water only social tariffs customer			0.000	2N.19
Average revenue forgone by company to fund cross-subsidy per wastewater only social tariffs customer			0.000	2N.20

Line description	Revenue £m	Number of customers 000s	Average amount per customer £	RAG 4 Ref
Average revenue forgone by company to fund cross-subsidy per dual service social tariffs customer			0.000	2N.21
Social tariff support - willingness to pay[63]				
Level of support for social tariff customers reflected in business plan			8.406	2N.22
Maximum contribution to social tariffs supported by customer engagement			12.329	2N.23

Use of social tariffs (RAG 3, 4.47)

We support our low-income households with the WaterHelp social tariff. If customers qualify, we offer a 50% discount on their whole bill. Further information is available on our website.

[63] Note that the level of support and maximum contribution to social tariffs as set out on lines 2N.22 and 2N.23 above, do not take into account additional customer engagement that was carried out in the autumn of 2022. The additional support obtained through this customer engagement did not feature in our setting of charges for 2022-23 but did feature in our 2023-24 charges. As such, the additional support will be reported for the first time in our Annual Performance Report for 2023-24.

Table 2O: Historic cost analysis of intangible fixed assets

This table shows the value of fixed assets across our price control units.

Line description Units: £m	Residential Retail	Business Retail	Water Resources	Water Network+	Wastewater Network+	Bio-resources	TTT	Total	RAG 4 Ref
Cost									
At 1 April 2022	167.287	0.000	2.103	54.474	263.565	6.401	0.000	493.830	2O.1
Disposals	0.000	0.000	0.000	0.000	-0.600	-0.600	0.000	-1.200	2O.2
Additions	10.799	0.000	0.287	4.224	26.061	6.646	0.000	48.017	2O.3
Adjustments	-1.976	0.000	-0.099	1.638	4.313	-6.250	0.000	-2.374	2O.4
Assets adopted at nil cost	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2O.5
At 31 March 2023	176.110	0.000	2.291	60.336	293.339	6.197	0.000	538.273	2O.6
Amortisation									
At 1 April 2022	-45.007	0.000	-1.588	-29.895	-128.056	-16.154	0.000	-220.700	2O.7
Disposals	0.000	0.000	0.000	0.000	0.450	0.450	0.000	0.900	2O.8
Adjustments	0.000	0.000	0.101	1.275	-7.740	6.389	0.000	0.025	2O.9
Charge for year	-19.639	0.000	-0.374	-8.822	-34.512	-0.364	0.000	-63.711	2O.10
At 31 March 2023	-64.646	0.000	-1.861	-37.442	-169.858	-9.679	0.000	-283.486	2O.11
Net book amount at 31 March 2023	111.464	0.000	0.430	22.894	123.481	-3.482	0.000	254.787	2O.12
Net book amount at 1 April 2022	122.280	0.000	0.515	24.579	135.509	-9.753	0.000	273.130	2O.13
Amortisation for year									
Principal services	-19.639	0.000	-0.374	-8.822	-34.512	-0.364	0.000	-63.711	2O.14
Third party services	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2O.15
Total	-19.639	0.000	-0.374	-8.822	-34.512	-0.364	0.000	-63.711	2O.16

The net book value includes £263.9 million in respect of assets in the course of development.

Independent Auditor's report to the Water Services Regulation Authority (the WSRA) and the Directors of Thames Water Utilities Limited

Opinion

We have audited the tables within Thames Water Utilities Limited's (the "Company") Annual Performance Report for the year ended 31 March 2023 ("the Regulatory Accounting Statements") which comprise:

- the regulatory financial reporting tables comprising the income statement (table 1A), the statement of comprehensive income (table 1B), the statement of financial position (table 1C), the statement of cash flows (table 1D), the net debt analysis (table 1E), the financial flows (table 1F) and the related notes; and
- the regulatory price review and other segmental reporting tables comprising the segmental income statement (table 2A), the totex analysis – wholesale (table 2B), the cost analysis for retail (table 2C), the historic cost analysis of tangible fixed assets (table 2D), the analysis of 'grants and contributions' water resources, water network+ and wastewater network+ (table 2E), the residential retail (table 2F), the revenue analysis (table 2I), the infrastructure network reinforcement costs (table 2J), the infrastructure charges reconciliation (table 2K), the analysis of land sales (table 2L), the revenue reconciliation - wholesale (table 2M), residential retail - social tariffs (table 2N) and historic cost analysis of intangible assets (table 2O) and the related notes.

We have not audited the Outcome performance tables (3A to 3I) and the additional regulatory information in tables 4A to 4W, 5A to 5B, 6A to 6F, 7A to 7F, 8A to 8D, 9A, 10A to 10E and 11A.

In our opinion, the Company's Regulatory Accounting Statements have been prepared, in all material respects, in accordance with Condition F, the Regulatory Accounting Guidelines issued by the WSRA (RAG 1.09, RAG 2.08, RAG 2.09, RAG 3.14, RAG 4.11 and RAG 5.07) and the accounting policies (including the Company's published accounting methodology statements, as defined in RAG 3.14, appendix 2), set out on page 127 to 133.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)"), including ISA (UK) 800, and applicable law, except as stated in the section on Auditors' responsibilities for the audit of the Regulatory Accounting Statements below, and having regard to the guidance contained in ICAEW Technical Release Tech 02/16 AAF 'Reporting to Regulators on Regulatory Accounts' issued by the Institute of Chartered Accountants in England & Wales.

Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the Regulatory Accounting Statements within the Annual Performance Report section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit, including the Financial Reporting Council's (FRC's) Ethical Standard as applied to public interest entities, and we have fulfilled our ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter – special purpose basis of preparation

We draw attention to the fact that the Regulatory Accounting Statements have been prepared in accordance with a special purpose framework, Condition F, the Regulatory Accounting Guidelines, the accounting policies (including the Company's published accounting methodology statements, as defined in RAG 3.14, appendix 2) set out in the statement of accounting policies and under the historical cost convention. The nature, form and content of the Regulatory Accounting Statements are determined by the WSRA. As a result, the Regulatory Accounting Statements may not be suitable for another purpose. It is not appropriate for us to assess whether the nature of the information being reported upon is suitable or appropriate for the WSRA's purposes. Accordingly, we make no such assessment. In addition, we are not required to assess whether the methods of cost allocation set out in the accounting methodology statement are appropriate to the circumstances of the Company or whether they meet the requirements of the WSRA.

The Regulatory Accounting Statements are separate from the statutory financial statements of the Company and have not been prepared under the basis of United Kingdom adopted international accounting standards ("UK IASs"). Financial information other than that prepared on the basis of UK IASs does not necessarily represent a true and fair view of the financial performance or financial position of a Company as shown in statutory financial statements prepared in accordance with the Companies Act 2006.

The Regulatory Accounting Statements on pages 114 to 153 have been drawn up in accordance with Regulatory Accounting Guidelines with a number of departures from UK IASs. A summary of the effect of these departures in the Company's statutory financial statements is included in the tables within section 1.

Our opinion is not modified in respect of this matter.

Conclusions relating to going concern

In auditing the Regulatory Accounting Statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the Regulatory Accounting Statements is appropriate.

Our evaluation of the directors' assessment of the company's ability to continue to adopt the going concern basis of accounting included:

- Testing the mathematical integrity of the cash flow forecasts and the models supporting the forecasts used by management to support their going concern assumption and reconciling these to Board approved budgets.
- Understanding the key assumptions management have applied in developing their base case and severe but plausible and severe downside scenarios where it was assessed there was sufficient headroom to "trigger" and "event of default" thresholds. These can be split as those that are more judgemental in nature and those that are less judgemental. For those less judgemental assumptions such as revenue growth, we verified this to published tariffs for FY24 in compliance with Ofwat's guidance. For those more judgemental assumptions such as power costs which is a largely non-discretional cost subject to volatility, we understood the basis on which management had made these assumptions. We challenged various aspects of management's base case and downside scenarios, including how management have created their severe but plausible downside case as a combination of various individual scenarios. We concluded that the base case was reasonable and the downside case appropriately severe but plausible.

- Performing a comparison of budget versus actual for the year ended 31 March 2023 and understanding where variances had arisen. Through this testing we obtained reasonable assurance over management's ability to forecast accurately.
- Developing our own assessment of forecast FY24 operating cashflows, by taking the FY23 operating cashflow and including forecast positive cashflow movements we considered to be less judgemental (e.g. revenue growth). We then considered the level of additional spend that would need to be incurred in excess of the FY23 actuals for a breach to occur on the PMICR covenant assuming no mitigating actions from management. From this assessment we concluded that it was unlikely that expenditure could be at a level to lead to a covenant breach.
- Verifying liquidity forecasts to the Board approved budget and testing that contractual debt principal and interest payments had been appropriately included within the forecasts. We considered the headroom of expected cash outflows in the going concern period against available liquidity, identifying a reasonable level of headroom to allow for unexpected spend.
- Obtaining and understanding the terms of the Group's financing and credit facilities, the Whole Business Securitisation, and in particular the financial covenants that the Group must adhere to. We have verified the existence of the facilities in place on which management has based its liquidity forecast for a period of in excess of 12 months from the date of the approval of the 31 March 2023 financial statements (the going concern period).
- Obtaining covenant compliance certificates, confirming that all the key covenants that impact the continued access to finance have been considered over the relevant time periods and verifying the mathematical accuracy, and testing inputs back to either the year end financial numbers or for forecasted information to the Board approved budget.
- Obtaining the latest credit ratings for the TWUL group and verifying that the group maintained an investment grade rating through the year and up to the date of this report and therefore taking reasonable assurance that the Group should still be able to access capital markets as required.
- Performing enquires and reviewing correspondences with Regulators and various stakeholders to corroborate management' position and assess if there is any contradictory information in light of increasing media attention and regulatory scrutiny.
- Assessing the disclosure given in the financial statements in respect of going concern and whether it gives a fair and balanced view.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

However, because not all future events or conditions can be predicted, this conclusion is not a guarantee as to the company's ability to continue as a going concern

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Other information

The other information comprises all of the information in the Annual Performance Report other than the Regulatory Accounting Statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the Regulatory Accounting Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Regulatory Accounting Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Regulatory Accounting Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the Regulatory Accounting Statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact.

We have nothing to report based on these responsibilities.

Responsibilities of the Directors for the Annual Performance Report

As explained more fully in the Statement of Directors' Responsibilities set out on page 100 to 101, the directors are responsible for the preparation of the Annual Performance Report in accordance with Condition F, the Regulatory Accounting Guidelines issued by the WSRA and the Company's accounting policies (including the Company's published accounting methodology statements, as defined in RAG 3.14, appendix 2).

The directors are also responsible for such internal control as they determine is necessary to enable the preparation of the Annual Performance Report that is free from material misstatement, whether due to fraud or error.

In preparing the Annual Performance Report, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the Audit of the Regulatory Accounting Statements within the Annual Performance Report

Our objectives are to obtain reasonable assurance about whether the Regulatory Accounting Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the Regulatory Accounting Statements.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

We considered the nature of the company's industry and its control environment and reviewed the company's documentation of their policies and procedures relating to fraud and compliance with laws and regulations. We also enquired of management and internal audit about their own identification and assessment of the risks of irregularities.

We obtained an understanding of the legal and regulatory framework that the company operates in, and identified the key laws and regulations that:

- had a direct effect on the determination of material amounts and disclosures in the Regulatory Accounting Statements. These included Regulatory Accounting Guidelines as issued by the WRSA,

UK Companies Act 2006, pensions legislation, UK corporation tax legislation, Environmental regulations, Listing rules; and

- do not have a direct effect on the Regulatory Accounting Statements but compliance with which may be fundamental to the company's ability to operate or to avoid a material penalty. These included the company's operating licence, regulatory solvency requirements and environmental regulations.

In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override. In addressing the risk of fraud through management override of controls, we tested the appropriateness of journal entries and other adjustments; assessed whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluated the business rationale of any significant transactions that are unusual or outside the normal course of business.

In addition to the above, our procedures to respond to the risks identified included the following:

- Discussions and enquiries of management, internal the audit function and legal counsel, including consideration of known or suspected instances of non-compliance with laws and regulation and fraud;
- Evaluation of management's controls designed to prevent and detect irregularities;
- Challenging assumptions made by management in determining significant accounting estimates and judgments, including challenging management in relation to how they have considered climate risk in such critical estimates. We have tested significant accounting estimates and judgements to supporting documentation, considering alternative information where available along with considering the appropriateness of the related disclosures in the financial statements;
- Identifying and testing a sample of journal entries throughout the whole year, which met our pre-determined fraud risk criteria;
- Reviewing minutes of meetings of those charged with governance and reviewing internal audit reports; and
- Performing unpredictable procedures by sampling non-standard payments, the set up of new suppliers, vendor detail changes, testing of dormant and non period-end bank accounts, and posting of journal entries from unexpected users.

A further description of our responsibilities for the audit of the Regulatory Accounting Statements is located on the Financial Reporting Council's website at www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of this report

This report is made, on terms that have been agreed, solely to the Company and the WSRA in order to meet the requirements of Condition F of the Instrument of Appointment granted by the Secretary of State for the Environment to the Company as a water and sewage undertaker under the Water Industry Act 1991 ("Condition F"). Our audit work has been undertaken so that we might state to the Company and the WSRA those matters that we have agreed to state to them in our report, in order (a) to assist the Company to meet its obligation under Condition F to procure such a report and (b) to facilitate the carrying out by the WSRA of its regulatory functions, and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the WSRA, for our audit work, for this report or for the opinions we have formed.

Our opinion on the Regulatory Accounting Statements is separate from our opinion on the statutory financial statements of the Company for the year ended 31 March 2023 on which we reported on 10 July 2023, which are prepared for a different purpose. Our audit report in relation to the statutory financial statements of the Company (our "Statutory audit") was made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our Statutory audit work was undertaken so that we might state to the Company's members those matters we are required to state to them in a statutory audit report and for no other purpose. In these circumstances, to the fullest extent permitted by law, we do not accept or assume responsibility for any other purpose or to any other person to whom our Statutory audit report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

PricewaterhouseCoopers LLP

Chartered Accountants and Statutory Auditors

Reading

10 July 2023

Section 3
Performance summary

Table 3A: Outcome performance – Water performance commitments (Financial)[64]

Line description	Ref	Unit	Performance level actual [65]	PCL met ?	Out/under performance payment £m	Forecast of total 2020-25 out/under performance payment £m[66]	RAG 4 Ref
Water quality compliance	BW06a	nr	10.96 Ⓐ	No	-16.043	-19.273	3A.1
Water supply interruptions	BW03	hh:mm:ss	00:19:54 Ⓐ	No	-20.022	-51.366	3A.2
Leakage	BW04	%	10.7 Ⓐ	No	-8.908	-30.800	3A.3
Per capita consumption	BW05	%	0 Ⓐ	No	0.000	-4.678	3A.4
Mains repairs	BW01	nr	316.8 Ⓐ	No	-16.674	-30.869	3A.5
Unplanned outage	BW02	%	2.65 Ⓐ	Yes	0.000	0.000	3A.6
Properties at risk of receiving low pressure	BW07	nr	7	Yes	0.000	-0.105	3A.7
Acceptability of water to consumers	BW08	nr	0.44	Yes	0.000	0.000	3A.8
Water quality events	BW09	nr	12	No	-0.142	-0.142	3A.9
Reducing risk of lead	BW10	nr	39,257	Yes	0.689	1.933	3A.10
Security of supply index	DW02	score	99 Ⓐ	No	-0.224	-0.224	3A.11
Power resilience	DWS01	nr	4	No	0.000	-10.195	3A.12
SEMD - Securing our sites (2020-25 projects)	DWS02	%	53.6	Yes	0.000	-3.115	3A.13
SEMD - Securing our sites (legacy projects)	DWS03	%	68.2	Yes	0.000	0.000	3A.14
Unregistered Household Properties	ER01	text	Process not completed	No	-0.211	-0.633	3A.15
Empty household properties	ER02	%	3.30	Yes	0.231	0.925	3A.16
Abstraction Incentive Mechanism (AIM)	EW01	nr	44.2	No	0.000	0.000	3A.17
Empty business properties	EWS08	nr	2,442	Yes	0.278	1.873	3A.18
Installing new smart meters in London	M01	nr	246,325	Yes	0.000	0.000	3A.19
Replacing existing meters with smart meters in London	M02	nr	91,624	Yes	0.000	0.000	3A.20
Trunk mains renewal (London network conditional allowance) [67]	LWI01	km	0	Yes	0.000	0.000	3A.21
Financial water PCs achieved		%	52				3A.27
Overall PCs achieved (excluding C-MEX and D-MEX)		%	62				3A.28

[64] Please note that BW06a – Water quality compliance (CRI), BW08 – Acceptability of water to consumers and BW09 – Water quality events all cover the period with the year ending on 31 December 2022. All other metrics in this table are for the period with the year ending on 31 March 2023.

[65] PricewaterhouseCoopers LLP ("PwC") conducted an independent limited assurance engagement on selected Subject Matter Information (shown with the symbol Ⓐ) for the year ended 31 March 2023 in accordance with International Standard on Assurance Engagements 3000 (revised).

[66] Prudent and cautious forecast of performance combining our cumulative year three position, operational modelling and budget information for the remaining years of the AMP. This could be subject to change as we complete our capital programme review.

[67] This performance commitment has no expected performance level for this year.

Table 3B: Outcome performance – Wastewater performance commitments (Financial)[68]

Line description	Ref	Unit	Performance level actual[69]	PCL met?	Out/under performance payment £m	Forecast of total 2020-25 out/under performance payment £m	RAG 4 Ref
Internal sewer flooding	CS03	nr	1.91 Ⓐ	No	-5.531	-59.425	3B.1
Pollution incidents	ES01	nr	30.37 Ⓐ	No	-9.345	-42.299	3B.2
Sewer collapses	CS02	nr	3.55 Ⓐ	Yes	0.340	0.687	3B.3
Treatment works compliance	CS01	%	99.48 Ⓐ	No	0.000	-0.123	3B.4
Clearance of blockages	CS04	nr	73,780	No	-8.811	-27.740	3B.5
Sewage pumping station availability	CS05	%	97.8	Yes	0.000	0.000	3B.6
Surface water management	DS02	nr	0.66 Ⓐ	No	0.000	-2.559	3B.7
Environmental measures delivered	ES02	nr	536	Yes	0.000	-2.822	3B.8
Sludge treated before disposal	ES03	%	99.4	Yes	0.000	0.000	3B.9
Readiness to receive tunnel flow at Beckton STW	ET01	Nr	0	Yes	0.000	0.000	3B.10
Critical asset readiness for the London Tideway Tunnels	ET04	text	0	Yes	0.000	0.000	3B.11
Enhancing biodiversity	EWS01	Nr	331	No	0.000	0.000	3B.12
Smarter Water Catchment Initiatives	EWS02	Nr	3	Yes	0.000	0.000	3B.13
Renewable energy produced	EWS03	GWh	536	Yes	2.096	5.884	3B.14
Managing early handback of Tideway project land	ET07	mths	6	Yes	0.000	5.120	3B.15
Financial wastewater performance commitments achieved		%	60				3B.19

[68] ES01 (Pollution incidents) and CS01 (Treatment works compliance) cover the period with the year ending on 31 December 2022. All other metrics in this table are for the period with the year ending on 31 March 2023.

[69] PricewaterhouseCoopers LLP (PwC) conducted an independent limited assurance engagement on selected Subject Matter Information (shown with the symbol Ⓐ) for the year ended 31 March 2023 in accordance with International Standard on Assurance Engagements 3000 (revised).

Table 3C: Customer measure of experience ("C-MeX") table

Item	Unit	Value	RAG 4 Ref
Annual customer satisfaction score for the customer service survey	nr	59.47	3C.1
Annual customer satisfaction score for the customer experience survey	nr	74.65	3C.2
Annual C-MeX score (AR01)	nr	67.06	3C.3
Annual net promoter score	nr	-10.00	3C.4
Total household complaints	nr	75768	3C.5
Total connected household properties	nr	5,932,348	3C.6
Total household complaints per 10,000 connections	nr	127.720	3C.7
Confirmation of communication channels offered	TRUE/ FALSE	TRUE	3C.8

Table 3D: Developer services measure of experience ("D-MeX") table

Item	Unit	Value	RAG 4 Ref
Qualitative component annual results	nr	66.55	3D.1
Quantitative component annual results	nr	94.37	3D.2
D-MeX score (AWS01)	nr	80.46	3D.3
Developer services revenue (water)	£m	36.536	3D.4
Developer services revenue (wastewater)	£m	15.958	3D.5

Calculating the D-MeX quantitative component

Water UK performance metric	Unit	Reporting period (1 April to 31 March)	Quantitative score (annual)	RAG 4 Ref
W1.1	%	100.00%		3D.W1
W3.1	%	95.91%		3D.W2
W4.1	%	85.10%		3D.W3
W6.1	%	95.31%		3D.W4
W7.1	%			3D.W5
W8.1	%	68.22%		3D.W6
W17.1	%	95.12%		3D.W7
W17.2	%	100.00%		3D.W8
W18.1	%	87.80%		3D.W9
W20.1	%			3D.W10
W21.1	%			3D.W11
W23.1	%			3D.W12
W24.1	%			3D.W13
W26.1	%			3D.W14
W27.1	%	100.00%		3D.W15
W30.1	%	100.00%		3D.W16
S1.1	%	99.91%		3D.W17
S3.1	%	100.00%		3D.W18
S4.1	%	100.00%		3D.W19
S7.1	%			3D.W20
SN2.2	%	100.00%		3D.W21
SN4.1	%			3D.W22
WN1.1	%	100.00%		3D.W23
WN2.2	%	100.00%		3D.W24
WN4.1	%			3D.W25
WN4.2	%	100.00%		3D.W26
WN4.3	%	100.00%		3D.W27
SAM 3/1	%	99.30%		3D.W28
SAM 4/1	%	96.49%		3D.W29
SLPM – S1/2	%	98.51%		3D.W30
SLPM - S2/2a	%	98.04%		3D.W31
SLPM - S2/2b	%	100.00%		3D.W32
SLPM – S3	%	87.64%		3D.W33
SLPM – S4/1	%	58.06%		3D.W34
SLPM – S5/1a	%	85.71%		3D.W35
SLPM – S7/1	%	96.92%		3D.W36
D-MeX quantitative	%	94.37%		3D.7
D-MeX quantitative score (annual)	nr		0.94	3D.8

Table 3E: Outcome performance – non-financial performance commitments

Line description	Ref	Unit	Performance level actual[70]	PCL met?	RAG 4 Ref
Risk of severe restrictions in a drought	DW01	%	0.9	No	3E.1
Priority services for customers in vulnerable circumstances - PSR reach	AR06	%	6.2 Ⓐ	Yes	3E.2
Priority services for customers in vulnerable circumstances - Attempted contacts	AR06	%	93.7 Ⓐ	Yes	3E.3
Priority services for customers in vulnerable circumstances - Actual contacts	AR06	%	47.4 Ⓐ	Yes	3E.4
Risk of sewer flooding in a storm	DS01	%	10.25 Ⓐ	Yes	3E.5
Percentage of satisfied vulnerable customers	AR05	%	88	No	3E.6
Proactive customer engagement	AWS02	nr	136,796	No	3E.7
Responding to major trunk mains bursts	BW11	hh:mm:ss	00:08:54	No	3E.8
Households on the Thames Water social tariff	ER03	nr	306,506	Yes	3E.9
Effective stakeholder engagement	ET02	score	5.1	Yes	3E.10
Establish an effective system operator for the London Tideway Tunnels	ET05	%	1[71]	Yes	3E.11
Maximising the value of Tideway project land sales	ET06	£m	0.0	Yes	3E.12
Natural Capital Accounting	EWS04	%	100.0	Yes	3E.13
BSI for fair, flexible inclusive services	AR07	text	Maintained	Yes	3E.14
WINEP Delivery	NEP01	text	No	No	3E.15
Delivery of DWMPs	DWMP	%	100	Yes	3E.16
Understanding the risk of flooding in the Counters Creek catchment	CC	text	N/A	Yes	3E.17
Future London strategy (London network conditional allowance)	LWI02	text	0	Yes	3E.18
Data validation (London network conditional allowance)	LWI03	text	0	Yes	3E.19
Non-financial performance commitments achieved		%		74	3E.29

[70] PricewaterhouseCoopers LLP (PwC) conducted an independent limited assurance engagement on selected Subject Matter Information (shown with the symbol Ⓐ) for the year ended 31 March 2023 in accordance with International Standard on Assurance Engagements 3000 (revised).

[71] This entry should read 0.65, but the Ofwat model has rounded it to 1

Table 3F: Underlying calculations for common performance commitments – water and retail

Performance commitments set in standardised units – Water						
Line description	Unit	Standardising data indicator	Standardising data numerical value	Performance level Actual	Performance level - Calculated (i.e. standardised)	RAG4 Ref
Mains repairs - Reactive	per 1,000km	Mains length in km	31,926.65	5,158	161.56	3F.1
Mains repairs - Proactive	per 1,000km	Mains length in km	31,926.65	4,956	155.23	3F.2
Mains repairs	per 1,000km	Mains length in km	31,926.65	10,114	316.79	3F.3
Per capita consumption (PCC)	l/p/d	Total household population (000s) and consumption (Ml/d)	10,275.88	1,445	140.60	3F.4

Performance commitments measured against a calculated baseline							
Line description	Unit	actual (2017-18)	actual (2018-19)	actual (2019-20)	Baseline (average from 2017-18 to 2019-20)	actual (2020-21)	Performance level - actual (2021-22)
Leakage	Ml/d	699.4	694.0	629.8	674.4	593.2	593.8
Per capita consumption	lpd	145.8	147.1	144.9	146.0	152.8	144.7

Line description	Unit	actual (2022-23)	actual (2023-24)	actual (2024-25)	Performance level 3 year average (current and previous 2 years)	Calculated performance level to compare against PCLs	RAG4 Ref
Leakage	Ml/d	619.7			602.2	10.7	3F.5
Per capita consumption	lpd	140.6			146.0	0.0	3F.6

Water supply interruptions							
Line description	Unit	Standardising data indicator	Standardising data numerical value	Total minutes lost	Number of properties supply interrupted	Calculated performance level	RAG4 ref
Water supply interruptions	minutes	Number of properties (000s)	4,037.76	80351364	39,466	00:19:54	3F.7

Unplanned or planned outage				
Line description	Current company level peak week production capacity (PWPC) Ml/d	Reduction in company level PWPC Ml/d	Outage proportion of PWPC %	RAG4 Ref
Unplanned outage	3,403.90	90.20	2.65%	3F.8

Priority services for customers in vulnerable circumstances				
Line description	Total residential properties (000s)	Total number of households on the PSR (as at 31 March)	PSR reach	Total number of households on the PSR over a 2-year period
Priority services for customers in vulnerable circumstances	5,745.87	358,899	6.2%	150,030

Line description	Number of attempted contacts over a 2-year period	Attempted contacts %	Number of actual contacts over a 2-year period	Actual contacts %	RAG4 ref
Priority services: customers in vulnerable circumstances	140,511	93.7%	71,163	47.4%	3F.9

Table 3G: Underlying calculations for common performance commitments – wastewater

Performance commitments set in standardised units							
Line description	Ref	Unit	Standardising data indicator	Standardising data numerical value	Performance level actual current reporting year	Calculated performance level	RAG 4 Ref
Internal sewer flooding - customer proactively reported	CS03	Per 10,000 sewer connections	Number of sewer connections	6,139.60	1,092	1.78	3G.1
Internal sewer flooding - company reactively identified (i.e. neighbouring properties)	CS03	Per 10,000 sewer connections	Number of sewer connections	6,139.60	78	0.13	3G.2
Internal sewer flooding	CS03	Per 10,000 sewer connections	Number of sewer connections	6,139.60	1,170	1.91	3G.3
Pollution incidents	ES01	Per 10,000km of sewer length	Sewer length in km	108,980.00	331	30.37	3G.4
Sewer collapses	CS02	Per 1,000km of all sewers	Sewer length in km	109,355.00	388	3.55	3G.5

Table 3H: Summary information on outcome delivery incentives

Line description Units: £m (2017-18 prices)	Initial calculation of performance payments (excluding C-MeX and D-MeX)	RAG 4 Ref
Initial calculation of in period revenue adjustment by price control		
Water resources	-0.47	3H.1
Water network plus	-60.71	3H.2
Wastewater network plus	-23.00	3H.3
Bioresources (sludge)	1.89	3H.4
Residential retail	0.02	3H.5
Business retail	0.00	3H.6
Dummy control	0.00	3H.7
Initial calculation of end of period revenue adjustment by price control		
Water resources	0.00	3H.8
Water network plus	-7.14	3H.9
Wastewater network plus	-2.90	3H.10
Bioresources (sludge)	0.00	3H.11
Residential retail	0.00	3H.12
Business retail	0.00	3H.13
Dummy control	0.12	3H.14
Initial calculation of end of period RCV adjustment by price control		
Water resources	0.00	3H.15
Water network plus	0.00	3H.16
Wastewater network plus	0.00	3H.17
Bioresources (sludge)	0.00	3H.18
Residential retail	0.00	3H.19
Business retail	0.00	3H.20
Dummy control	0.00	3H.21

Table 3: Supplementary outcomes information

Unplanned or planned outage				
Line description	Current company level peak week production capacity (PWPC) Ml/d	Reduction in company level PWPC Ml/d	Outage proportion of PWPC %	RAG 4 Ref
Planned outage	3,403.90	39.90	1.17%	3I.1

Risk of severe restrictions in drought							
Line description	Deployable output	Outage allowance	Dry year demand	Target headroom	Total population supplied	Customers at risk	RAG 4 Ref
Risk of severe restrictions in drought	2,854.85	64.83	2,680.28	111.16	10,379.73	9,741.62	3I.2

Risk of sewer flooding in a storm					
Line description	Total pe served	Total pe in excluded catchments	Percentage of total pe in excluded catchments	Total pe Option 1a	Percentage of total pe Option 1a
Risk of sewer flooding in a storm	15,018,284	24,303	0.16%	936,720	6.24%

	Total pe Option 1b	Percentage of total pe Option 1b	Vulnerability risk grade			RAG 4 Ref
			Low	Medium	High	
			Percentage of total population served			
Risk of sewer flooding in a storm	603,269	4.02%	89.75%	0.00%	10.25%	3I.3

Sewer collapses		
Line description	Number of patch repairs or relining undertaken on sewer and not included in reported sewer collapses.	RAG 4 Ref
Sewer collapses	2,157	3I.4

Independent Limited Assurance Report to the Directors of Thames Water Utilities Limited on the Selected Performance Commitments

The Board of Directors of Thames Water Utilities Limited ("Thames Water") engaged us to obtain limited assurance on the Subject Matter Information as defined below and marked with the symbol Ⓐ in Tables 3A, 3B and 3E in 'Section 3 – Performance summary' of Thames Water's Annual Performance Report for the year ended 31 March 2023 (the "Report").

Our assurance conclusion does not extend to information in respect of earlier periods or to any other information included in, or linked from, the Report including any images, audio files or videos. In addition, the scope of our assurance did not extend to certain underlying data inputs into key systems and/or models where they are derived from scientific or mechanical data sources or where they come from generally accepted industry standard data.

Our limited assurance conclusion

Based on the procedures we have performed, as described under the 'Summary of work performed' and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Subject Matter Information in Thames Water's Report for the year ended 31 March 2023, has not been prepared, in all material respects, in accordance with the Reporting Criteria referenced in the 'Subject Matter Information and Reporting Criteria' section below.

Subject Matter Information and Reporting Criteria

The Subject Matter Information needs to be read and understood together with the Reporting Criteria, which Thames Water is solely responsible for selecting and applying. The Subject Matter Information and the Reporting Criteria are set out in the table below:

Line Description	*Ref.*	*RAG 4 Ref*	*Unit*	*Reporting period*[72]	*Performance level actual*	*Reporting Criteria*
Leakage	BW04	3A.3	% reduction in leakage using a 3-year average from the 2019/20 baseline	Reporting year	10.7	https://www.thameswater.co.uk/about-us/investors/our-results[73]
Per Capita Consumption	BW05	3A.4	Three-year average % reduction in the average water usage of household customers	Reporting year	0.0	
Treatment Works Compliance	CS01	3B.4	% of our treatment works compliant with their discharge permit conditions	Calendar year	99.48	

[72] Please note that those performance commitments with a 'Calendar year' reporting period cover the period from 1 January 2022 to 31 December 2022 and 'Reporting year' reporting period cover the period from 1 April 2022 to 31 March 2023.

[73] The maintenance and integrity of Thames Water's website is the responsibility of the Directors; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the reported Subject Matter Information or Reporting Criteria when presented on Thames Water's website.

Line Description	*Ref.*	*RAG 4 Ref*	*Unit*	*Reporting period*[72]	*Performance level actual*	*Reporting Criteria*
Unplanned Outage	BW02	3A.6	% of water we were unable to supply due to unforeseen circumstances	Reporting year	2.65	
Internal Sewer Flooding	CS03	3B.1	Number of internal sewer flooding incidents per 10,000 sewer connections	Reporting year	1.91	
Water Supply Interruptions	BW03	3A.2	Length of time our customers don't have water (in mm:ss)	Reporting year	19:54	
Risk of Sewer Flooding in a Storm	DS01	3E.5	% of the population at the risk of sewer flooding in a storm from a 1 in 50-year storm	Reporting year	10.25%	
Surface Water Management	DS02	3B.7	Area (in hectares) where surface water is disconnected from the public sewer system	Reporting year	0.66	
Water Quality Compliance	BW06a	3A.1	Annual aggregated score of our level of treated water compliance incidents	Calendar year	10.96	
Priority Services for Customers in Vulnerable Circumstances - PSR Reach	AR06	3E.2	% of customers on our priority service register	Reporting year	6.2	
Priority Services for Customers in Vulnerable Circumstances - Attempted Contacts	AR06	3E.3	% of customers on our priority service register	Reporting year	93.7	
Priority Services for Customers in Vulnerable Circumstances - Actual Contracts	AR06	3E.4	% of customers on our priority service register	Reporting year	47.4	
Mains Repair	BW01	3A.5	Number of repairs we have made to the network per 10,000kms of mains	Reporting year	316.8	
Pollution Incidents	ES01	3B.2	Number of pollution incidents per 10,000km of our wastewater network that pose a danger to the environment	Calendar year	30.37	
Sewer Collapses	CS02	3B.3	Number of sewer collapses per	Reporting year	3.55	

Line Description	Ref.	RAG 4 Ref	Unit	Reporting period[72]	Performance level actual	Reporting Criteria
			10,000 sewer connections			
Security of Supply Index	DW02	3A.11	Our ability to maintain a water supply, particularly during a drought (index out of 100)	Reporting year	99	

Inherent limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, evaluation and measurement techniques that can affect comparability between entities and over time.

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the underlying subject matter and the methods used for determining such information. The precision of different measurement techniques may also vary.

Responsibilities of the directors

The Directors of Thames Water are responsible for:

- determining appropriate reporting topics and selecting or establishing suitable criteria for measuring or evaluating the underlying subject matter;
- ensuring that those criteria are relevant and appropriate to Thames Water and the intended users of the Report;
- the preparation of the Subject Matter Information in accordance with the Reporting Criteria including designing, implementing and maintaining systems, processes and internal controls over the evaluation or measurement of the underlying subject matter to result in Subject Matter Information that is free from material misstatement, whether due to fraud or error; and
- producing the Report, including underlying data and a statement of directors' responsibility, which provides a balanced reflection of Thames Water's performance in this area and discloses, with supporting rationale, matters relevant to the intended users of the Report.

Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the Subject Matter Information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the Directors of Thames Water.

Professional standards applied

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information', issued by the International Auditing and Assurance Standards Board.

Our independence and quality control

We have complied with the Institute of Chartered Accountants in England and Wales Code of Ethics, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour, that are at least as demanding as the applicable provisions of the International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards).

We apply the International Standard on Quality Management (UK) 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of work performed

We performed a limited assurance engagement. Limited assurance can cover a range of assurance from low (i.e. just above assurance that is likely to enhance the intended user's confidence about what has been assured to a degree that it is clearly more than inconsequential) to just below reasonable assurance. Because the level of assurance in a limited assurance engagement varies in this way, we give more detail about the procedures performed, so that the intended users can understand the nature, timing and extent of procedures we performed as context for our conclusion. These procedures performed vary in nature and timing from, and are less than in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

In performing our assurance procedures, which were based on our professional judgement, we performed the following:

- considered the suitability in the circumstances of Thames Water's use of the Reporting Criteria, as the basis for preparing the Subject Matter Information;
- considered the Subject Matter Information and the Reporting Criteria in the context of Ofwat's Final Determination;
- obtained an understanding of Thames Water's control environment, processes and systems relevant to the preparation of the Subject Matter Information. Our procedures did not include evaluating the suitability of design or operating effectiveness of control activities;
- evaluated the appropriateness of measurement and evaluation methods, reporting policies used and estimates made by Thames Water, noting that our procedures did not involve testing the data on which the estimates are based or separately developing our own estimates against which to evaluate Thames Water's estimates;
- performed limited substantive testing on a selective basis of the Subject Matter Information, testing involved: comparing year on year movements and obtaining explanations from management for significant differences we identified, designing and executing testing to access completeness of the data, agreeing arithmetical accuracy and agreeing data points to or from source information to check that the underlying subject matter had been appropriately evaluated or measured, recorded, collated and reported;
- assessed the impact of the Ofwat and Environment Agency investigations into Flow to Full Treatment at sewage treatment works on the wastewater-related performance commitments "Pollution Incidents" and "Treatment Works Compliance". In doing so, we interviewed management, structured our assurance procedures to consider the potential for Flow to Full Treatment to impact the performance commitments, and reviewed correspondence from the Environment Agency to corroborate the reported figures; and
- considered the disclosure and presentation of the Subject Matter Information, including reconciliation of the underlying data to the disclosure of the Subject Matter Information.

Other information

The other information comprises all of the information in the Report other than the Subject Matter Information and our assurance report. The directors are responsible for the other information. As explained above, our assurance conclusion does not extend to the other information and, accordingly, we do not express any form of assurance thereon. In connection with our assurance of the Subject Matter Information, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Subject Matter Information or our knowledge obtained during the assurance engagement, or otherwise appears to contain a material misstatement of fact. If we identify an apparent material inconsistency or material misstatement of fact, we are required to perform procedures to conclude whether there is a material misstatement of the Subject Matter Information or a material misstatement of the other information, and to take appropriate actions in the circumstances.

Use of our report

Our report, including our conclusion, has been prepared solely for the Board of Directors of Thames Water in accordance with the agreement between us dated 22 February 2023, as amended by the variation letter dated 4 July 2023 (together the "agreement") To the fullest extent permitted by law, we do not accept or assume responsibility or liability to anyone other than the Board of Directors and Thames Water for our work or this report except where terms are expressly agreed between us in writing.

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Chartered Accountants
Watford
10 July 2023

Section 4
Additional regulatory information – service level

Table 4A: Water bulk supply information

This table shows the value and volume of bulk supply imported and exported

Line description	Volume	Operating costs	Revenue	RAG 4 Ref
Units	Ml	£m	£m	
Bulk supply exports				
Affinity Water	5,426.330	1.165	2.568	4A.1
Albion Water	124.215	0.053	0.115	4A.2
Anglian Water	80.200	0.034	0.000	4A.3
Essex & Suffolk Water	36,183.810	2.317	2.374	4A.4
Independent Water Networks	1,290.00	0.479	1.332	4A.5
Leep Utilities	2,009.52	0.778	1.859	4A.6
Wessex	6.852	0.003	0.011	4A.7
ICOSA	4.509	0.002	0.004	4A.8
Total bulk supply exports	45,125.431	4.831	8.263	4A.26

Line description	Volume	Operating costs		RAG 4 Ref
Units	Ml	£m		
Bulk supply imports				
Northumbrian Water (Essex & Suffolk - Abberton)	31.907	1.846		4A.27
RWE Generation UK	24.869	2.836		4A.28
Anglian Water	127.600	0.195		4A.29
Severn Trent	10.852	0.017		4A.30
Total bulk supply imports	195.228	4.894		4A.52

Table 4B: Analysis of debt

We've chosen to publish the regulatory table 4B as a separate document to this Annual Performance Report due to the size of the table.

This table has been prepared in line with regulatory guidelines and follows the principles set out in this Annual Performance Report.

You can view this table on our website.

Notes to table 4B

Where commitment fees or margin are based on a credit rating grid, information included on the table above reflects the percentage which is currently applicable.

2058 and 2060 maturity swaps each constitute three restructured transactions, the table above shows the combined position

Foreign currency debt is shown after incorporating the impact of cross currency swap; hence such swaps are not included in above table. These swaps would fall under Swap category D, aside from one Yen swap which is Category B due to a break clause.

Where margin is variable a weighted average is shown.

The fair value of all receive legs and pay legs of the relevant swap should be added together to calculate the total fair value of the swap.

Any facility related unamortised fees have been included in the column "Issuance costs".

Start dates and maturity dates provided in the prior year were updated to the dates as per the lease contracts.

These leases have earlier termination dates than stated in the prior period, based on updates provided in the current year.

These leases have extended in the current period, based on updated provided.

As a result of modifications in the period, the discount rate on these leases have been updated to the latest discount rate for the remaining period of the lease in line with the accounting standards.

Table 4C: Impact of price control performance to date on RCV

Table 4C shows the projected adjustments to the Regulatory Capital Value that are expected at PR24.

Line description	12 months ended 31 March 2023					Price control period to date					
Units: £m	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	RAG 4 Ref
Final determination allowed totex (net of business rates, abstraction licence fees, grants and contributions and other items not subject to cost sharing)	105.002	774.176	887.278	149.751	29.541	273.046	2,395.758	2,439.044	284.022	94.081	4C.1
Actual totex (excluding business rates, abstraction licence fees, grants and contributions and other items not subject to cost sharing)	78.869	1,049.747	970.575	166.335	40.971	226.408	2,727.399	2,409.548	325.099	128.974	4C.2
Transition expenditure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.620	4C.3
Disallowable costs	0.000	8.602	25.784	11.000	7.647	0.040	9.755	83.041	21.036	48.692	4C.4
Total actual totex (net of business rates, abstraction licence fees and grants and contributions)	78.869	1041.145	944.791	155.335	33.324	226.368	2717.644	2326.507	304.063	81.902	4C.5
Variance	-26.133	266.969	57.513	5.584	3.783	-46.678	321.886	-112.537	20.041	-12.179	4C.6
Variance due to timing of expenditure	-26.133	266.969	57.513	5.584	3.783	-46.678	321.886	-112.537	20.041	-12.179	4C.7
Variance due to efficiency	0.000	100.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4C.8
Customer cost sharing rate - outperformance	25.00%	25.00%	25.00%	0.00%	42.00%	25.00%	25.00%	25.00%	0.00%	42.00%	4C.9
Customer cost sharing rate - underperformance	67.73%	67.73%	55.78%	0.00%	57.20%	67.73%	67.73%	55.78%	0.00%	57.20%	4C.10

Line description	12 months ended 31 March 2023					Price control period to date					
Units: £m	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	RAG 4 Ref
Customer share of totex overspend	0.000	67.730	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4C.11
Customer share of totex underspend	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4C.12
Company share of totex overspend	0.000	32.270	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4C.13
Company share of totex underspend	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4C.14
Final determination allowed totex - business rates and abstraction licence fees	19.281	83.360	30.999	10.706	0.000	54.104	233.916	86.987	30.042	0.000	4C.15
Actual totex - business rates and abstraction licence fees	26.903	68.000	48.992	2.049	0.000	69.595	196.777	118.790	9.394	0.000	4C.16
Variance - business rates and abstraction licence fees	7.622	-15.360	17.993	-8.657	0.000	15.491	-37.139	31.803	-20.648	0.000	4C.17
Customer cost sharing rate - business rates	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	4C.18
Customer cost sharing rate - abstraction licence fees	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	4C.19
Customer share of totex over/underspend - business rates and abstraction licence fees	5.717	-11.520	13.494	-6.493	0.000	11.618	-27.854	23.852	-15.486	0.000	4C.20
Company share of totex over/underspend - business rates and abstraction licence fees	1.906	-3.840	4.498	-2.164	0.000	3.873	-9.285	7.951	-5.162	0.000	4C.21
Final determination allowed totex - not subject to cost sharing	38.601	166.241	2.702	0.163	0.000	67.670	400.524	8.536	0.428	0.000	4C.22
Actual totex - not subject to cost sharing	8.164	17.326	13.200	11.000	7.647	22.328	73.256	48.371	19.223	7.647	4C.23

Line description	12 months ended 31 March 2023					Price control period to date					
Units: £m	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	RAG 4 Ref
Variance - 100% company allocation	-30.437	-50.597	10.498	10.837	7.647	-45.342	-327.268	39.835	18.795	7.647	4C.24
Total customer share of totex over/under spend	5.717	56.210	13.494	-6.493	0.000	11.618	-27.854	23.852	-15.486	0.000	4C.25
Total customer share of totex over/under spend	5.717	56.210	13.494	-6.493	0.000	11.618	-27.854	23.852	-15.486	0.000	4C.26
PAYG rate	46.60%	43.16%	44.17%	34.49%	12.75%	56.11%	43.21%	46.20%	38.66%	6.74%	4C.27
RCV element of cumulative totex over/underspend	3.053	31.950	7.534	-4.254	0.000	5.099	-15.819	12.832	-9.499	0.000	4C.28
Adjustment for ODI out or under performance payment						0.000	0.000	0.000	0.000	0.000	4C.29
Green recovery						0.000	-22.272	0.000		0.000	4C.30
RCV determined at FD at 31 March						508.347	8,206.167	6,644.720	1,894.986	1,690.870	4C.31
Projected 'shadow' RCV						513.447	8,168.075	6,657.552	1,885.486	1,690.870	4C.32

Notes for the impact of price control performance to date on RCV

At 4C.1, we have amended the allowance figures for Water network plus and TTT, as agreed with Ofwat. This is to remove a double count of conditional allowances expenditure (which is already included under the 'totex not subject to cost sharing' section) and to unwind income associated with TTT land sales and rent, which are not subject to cost sharing.

The RCV element of the totex over/(under)spend is a calculated value which reflects the customer's share of the difference between allowed and actual Totex, multiplied by (1 – the average AMP7 Pay As You Go Rate %) to arrive at the capitalised portion.

Different customer cost sharing rates are applied to the allowance/actuals variance based on individual price control and type of expenditure (i.e. subject to cost sharing, business rates, not subject to cost sharing). Note that this represents a change from prior year report which was showing the company's share of over/(under)spend. Conditional allowances and relevant totex spend are included in the 'totex not subject to cost sharing' totals. We are not subject to any ODI rewards or penalties with an RCV impact; all are taken through allowed revenues.

We are mid AMP, and as such at this stage have not identified for disclosure any AMP-wide inefficiencies across our price controls. Therefore, all differences between totex and the FD have been allocated to timing.

Wholesale Water

In 2022/23, our total actual totex (net of disallowable costs, business rates, abstraction licence fees and grants and contributions) for water of £1,120.019 million was £240.841 million higher than the FD allowance of £879.178 million (in 2022/23 prices). Variances to our FD are as follows:

Increased investment to improve customers and stakeholders needs in key areas of our performance e.g. water quality and water supply, leakage and supply interruptions

Increased capital delivery due to material ramp up in FY23, continuing our ramp up from FY22 following a slow start noted in FY21 (impact of COVID19) and transition to a more intelligent and efficient delivery model)

Increased costs due to higher inflation and price rises driven by macroeconomic factors (e.g. power, chemicals, wages).

Disallowable costs include costs associated with customer compensation.

The most material balance within 'actual totex – not subject to cost sharing' relates to non-price control grants and contributions

Wastewater Network Plus

In 2022/23, our total actual totex (net of disallowable costs, business rates, abstraction licence fees and grants and contributions) for waste of £944.789 million was £57.511 million higher than our FD allowance of £887.278 million (in 2022/23 prices). Variances to our FD are as follows:

Increased costs due to higher inflation and price rises driven by macroeconomic factors (e.g. power, chemicals, wages)

Disallowable costs include costs associated with customer compensation and pollution provision.

The most material balance within 'actual totex – not subject to cost sharing' relates to non-price control grants and contributions.

Table 4D: Totex analysis– water resources and water network+

This table provides information about the different activities undertaken as part of delivering upstream services with a breakdown of the total expenditure for carrying out the supply of water services.

Line description Unit £m	Water resources	Network+			Treated water distribution	Total	RAG 4 Ref
		Raw water transport	Raw water storage	Water treatment			
Base operating expenditure	76.214	10.651	0.000	121.677	359.530	568.072	4D.1
Enhancement operating expenditure	1.910	0.000	0.000	0.047	8.151	10.108	4D.2
Developer services operating expenditure	0.000	0.000	0.000	0.000	5.651	5.651	4D.3
Total operating expenditure excluding third party services	78.124	10.651	0.000	121.724	373.332	583.831	4D.4
Third party services	0.000	0.000	0.000	0.000	0.000	0.000	4D.5
Total operating expenditure	78.124	10.651	0.000	121.724	373.332	583.831	4D.6
Grants and contributions							
Grants and contributions - operating expenditure	0.000	0.000	0.000	0.000	0.608	0.608	4D.7
Capital expenditure							
Base capital expenditure	17.213	8.549	0.000	87.073	351.306	464.141	4D.8
Enhancement capital expenditure	18.599	0.886	0.000	23.236	130.119	172.839	4D.9
Developer services capital expenditure	0.000	0.000	0.000	0.000	69.688	69.688	4D.10
Total gross capital expenditure excluding third party services	35.812	9.435	0.000	110.309	551.113	706.668	4D.11
Third party services	0.000	0.000	0.000	0.000	0.000	0.000	4D.12
Total gross capital expenditure	35.812	9.435	0.000	110.309	551.113	706.668	4D.13
Grants and contributions							
Grants and contributions - capital expenditure	0.000	0.000	0.000	3.034	45.388	48.422	4D.14
Net totex	113.936	20.086	0.000	228.999	878.449	1,241.469	4D.15
Cash expenditure							
Pension deficit recovery payments	0.000	0.000	0.000	0.000	0.000	0.000	4D.16
Other cash items	0.000	0.000	0.000	0.000	0.000	0.000	4D.17
Totex including cash items	113.936	20.086	0.000	228.999	878.449	1,241.469	4D.18
Atypical expenditure							
Total atypical expenditure	0.000	0.000	0.000	0.000	0.000	0.000	4D.24

Table 4E: Totex analysis– wastewater network+ and bioresources

This table provides information about the different activities undertaken as part of delivering upstream services with a breakdown of the total expenditure for carrying out the supply of sewerage services.

Line description Unit £m	Network+ Sewage collection			Network+ Sewage treatment		Bioresources			Total	RAG 4 Ref
	Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal		
Base operating expenditure	175.278	28.775	5.949	246.273	14.032	7.353	20.216	39.515	537.391	4E.1
Enhancement operating expenditure	0.214	0.000	0.000	2.405	0.000	0.000	0.000	0.000	2.619	4E.2
Developer services operating expenditure	2.171	0.009	0.000	0.000	0.000	0.000	0.000	0.000	2.180	4E.3
Total operating expenditure excluding third party services	177.663	28.784	5.949	248.678	14.032	7.353	20.216	39.515	542.190	4E.4
Total third-party services	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4E.5
Total operating expenditure	177.663	28.784	5.949	248.678	14.032	7.353	20.216	39.515	542.190	4E.6
Grants and contributions - operating expenditure	2.225	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.225	4E.7
Base capital expenditure	191.054	3.884	1.092	156.474	0.001	0.559	76.015	15.285	444.364	4E.8
Enhancement capital expenditure	9.184	1.267	0.000	188.654	0.000	0.000	6.796	2.645	208.547	4E.9
Developer services capital expenditure	23.334	-0.023	0.000	0.000	0.000	0.000	0.000	0.000	23.312	4E.10
Total gross capital expenditure excluding third party services	223.572	5.129	1.092	345.128	0.001	0.559	82.811	17.930	676.222	4E.11

Line description Unit £m	Network+ Sewage collection			Network+ Sewage treatment		Bioresources			Total	RAG 4 Ref
	Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Imported sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal		
Third party services	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4E.12
Total gross capital expenditure	223.572	5.129	1.092	345.128	0.001	0.559	82.811	17.930	676.222	4E.13
Grants and contributions - capital expenditure	26.873	0.017	0.000	13.930	0.000	0.000	0.000	0.000	40.820	4E.14
Net totex	372.137	33.896	7.041	579.876	14.033	7.912	103.027	57.445	1,175.367	4E.15
Pension deficit recovery payments	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4E.16
Other cash items	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4E.17
Totex including cash items	372.137	33.896	7.041	579.876	14.033	7.912	103.027	57.445	1,175.367	4E.18
Total atypical expenditure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4E.24

Table 4F: Major project expenditure for wholesale water by purpose

This table shows wholesale water major projects operating, and capital expenditure split by purpose category.

Line description Units: £m	Expenditure in report year						RAG 4 Ref
	Water resources	Water network+				Total	
		Raw water transport	Raw water storage	Water treatment	Treated water distribution		
Major project expenditure by purpose							
Resilience Conditional Allowance	0.000	0.000	0.000	4.587	0.309	4.896	4F.1
Strategic Resourcing Options – Effluent Reuse in London	0.000	0.000	0.000	5.110	0.000	5.110	4F.2
Strategic Resourcing Options – Transfer TW-Affinity Water	0.000	0.609	0.000	0.000	0.000	0.609	4F.3
Strategic Resourcing Options – Transfer TW-Southern	0.000	0.319	0.000	0.000	0.000	0.319	4F.4
Strategic Resourcing Options – Abingdon Reservoir (SESRO)	4.942	0.000	0.000	0.000	0.000	4.942	4F.5
Strategic Resourcing Options – Severn Thames Transfer	3.550	0.000	0.000	0.000	0.000	3.550	4F.6
London Water Network Conditional Allowance	0.000	0.000	0.000	0.000	23.582	23.582	4F.7
Total major project capital expenditure	8.492	0.928	0.000	9.697	23.891	43.008	4F.11
Resilience Conditional Allowance	0.000	0.000	0.000	0.000	0.000	0.000	4F.12
Strategic Resourcing Options – Effluent Reuse in London	0.000	0.000	0.000	0.000	0.000	0.000	4F.13
Strategic Resourcing Options – Transfer TW-Affinity Water	0.000	0.000	0.000	0.000	0.000	0.000	4F.14
Strategic Resourcing Options – Transfer TW-Southern	0.000	0.000	0.000	0.000	0.000	0.000	4F.15
Strategic Resourcing Options – Abingdon Reservoir (SESRO)	0.000	0.000	0.000	0.000	0.000	0.000	4F.16
Strategic Resourcing Options – Severn Thames Transfer	0.000	0.000	0.000	0.000	0.000	0.000	4F.17
London Water Network Conditional Allowance	0.000	0.000	0.000	0.000	0.000	0.000	4F.18
Total major project operating expenditure	0.000	0.000	0.000	0.000	0.000	0.000	4F.22

Line description Units: £m	Cumulative expenditure on schemes completed in the report year						RAG 4 Ref
	Water resources	Water network+				Total	
		Raw water transport	Raw water storage	Water treatment	Treated water distribution		
Major project expenditure by purpose							
Resilience Conditional Allowance	0.000	0.000	0.000	0.000	0.000	0.000	4F.1
Strategic Resourcing Options – Effluent Reuse in London	0.000	0.000	0.000	0.000	0.000	0.000	4F.2
Strategic Resourcing Options – Transfer TW-Affinity Water	0.000	0.000	0.000	0.000	0.000	0.000	4F.3
Strategic Resourcing Options – Transfer TW-Southern	0.000	0.000	0.000	0.000	0.000	0.000	4F.4
Strategic Resourcing Options – Abingdon Reservoir (SESRO)	0.000	0.000	0.000	0.000	0.000	0.000	4F.5
Strategic Resourcing Options – Severn Thames Transfer	0.000	0.000	0.000	0.000	0.000	0.000	4F.6
London Water Network Conditional Allowance	0.000	0.000	0.000	0.000	0.000	0.000	4F.7
Total major project capital expenditure	0.000	0.000	0.000	0.000	0.000	0.000	4F.11
Resilience Conditional Allowance	0.000	0.000	0.000	0.000	0.000	0.000	4F.12
Strategic Resourcing Options – Effluent Reuse in London	0.000	0.000	0.000	0.000	0.000	0.000	4F.13
Strategic Resourcing Options – Transfer TW-Affinity Water	0.000	0.000	0.000	0.000	0.000	0.000	4F.14
Strategic Resourcing Options – Transfer TW-Southern	0.000	0.000	0.000	0.000	0.000	0.000	4F.15
Strategic Resourcing Options – Abingdon Reservoir (SESRO)	0.000	0.000	0.000	0.000	0.000	0.000	4F.16
Strategic Resourcing Options – Severn Thames Transfer	0.000	0.000	0.000	0.000	0.000	0.000	4F.17
London Water Network Conditional Allowance	0.000	0.000	0.000	0.000	0.000	0.000	4F.18
Total major project operating expenditure	0.000	0.000	0.000	0.000	0.000	0.000	4F.22

Table 4G: Major project expenditure for wholesale wastewater by purpose

This table shows wholesale wastewater major projects operating, and capital expenditure split by purpose category. No spend is disclosed in relation to this table as there are no waste-related projects within the Business that meet the RAG 4.11 definition of 'major projects'.

Line description Units: £m	Expenditure in report year									
	Wastewater network+					Bioresources			Total	RAG 4 Ref
	Sewage collection			Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal		
	Foul	Surface water drainage	Highway drainage							
Total major project capital expenditure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4G.11
Total major project operating expenditure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4G.22

Line description Units: £m	Cumulative expenditure on schemes completed in the report year									
	Wastewater network+					Bioresources			Total	RAG 4 Ref
	Sewage collection			Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal		
	Foul	Surface water drainage	Highway drainage							
Total major project capital expenditure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4G.11
Total major project operating expenditure	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4G.22

Table 4H: Financial metrics

This table shows our key financial metrics: measures of financial performance and financial position, revenue earned, earnings before interest, tax, depreciation and amortisation and an analysis of our borrowings in terms of interest payable and their maturity profile.

Line description	Units	Current year	AMP to date	RAG 4 Ref
Net debt	£m	14,676.397		4H.1
Regulatory equity	£m	4,268.693		4H.2
Regulatory gearing	%	77.47%		4H.3
Post tax return on regulatory equity	%	-8.16%		4H.4
RORE (return on regulatory equity)[74]	%	2.57%	1.90%	4H.5
Dividend yield	%	1.06%		4H.6
Retail profit margin - Household	%	-4.54%		4H.7
Retail profit margin - Non household	%	0.32%		4H.8
Credit rating - Fitch	Text	n/a		4H.9
Credit rating - Moody's	Text	BAA2 (Stable)		4H.10
Credit rating - Standard and Poor's[75]	Text	BBB (Stable outlook)		4H.11
Return on RCV	%	2.13%		4H.12
Dividend cover	dec	-6.78		4H.13
Funds from operations (FFO)	£m	833.122		4H.14
Interest cover (cash)	dec	3.42		4H.15
Adjusted interest cover (cash)	dec	0.07		4H.16
FFO/Net debt	dec	0.06		4H.17
Effective tax rate	%	23.88%		4H.18
Retained cash flow (RCF)	£m	787.922		4H.19
RCF/Net debt	dec	0.05		4H.20
Proportion of borrowings which are fixed rate	%	38.82%		4H.21
Proportion of borrowings which are floating rate	%	3.55%		4H.22
Proportion of borrowings which are index linked	%	57.63%		4H.23
Proportion of borrowings due within 1 year or less	%	10.25%		4H.24
Proportion of borrowings due in more than 1 year but no more than 2 years	%	5.27%		4H.25
Proportion of borrowings due in more than 2 years but no more than 5 years	%	21.24%		4H.26
Proportion of borrowings due in more than 5 years but no more than 20 years	%	42.88%		4H.27
Proportion of borrowings due in more than 20 years	%	20.36%		4H.28

Additional commentary on our financial metrics

[74] As disclosed in Table 1F, the calculation of RORE includes other exceptional items relating to land sales, pollution fines and customer compensation claims.

[75] Standard and Poor's ("S&P's") placed the credit rating on credit watch with negative implications on 30 June 2023.

TWUL Group retains investment grade credit ratings, which allow us to access efficiently priced debt to fund our investment programme whilst keeping bills affordable for our customers.

In December 2022, Moody's completed a periodic review of TWUL Group ratings, with the Corporate Family Rating ("CFR") for TWUL continuing as BAA2 with a stable outlook (31 March 2022: BAA2 with stable outlook) and our securitisation group companies' senior secured (Class A) debt rating continuing as BAA1 with stable outlook (31 March 2022: BAA1 with stable outlook) and subordinated (Class B) debt rating continuing as BA1 with stable outlook (31 March 2022: BA1 with stable outlook).

In September 2022, S&P lowered the ratings of the Company's Class A debt to BBB (31 March 2022: BBB+) and Class B debt to BB+ (31 March 2022: BBB-), with stable outlook (31 March 2022: CreditWatch negative).

Breakdown of interest paid

	£m
Net interest paid (1D.10)	-195.379
Income included in net interest paid but should be added back for the interest cover	
Interest received on Intercompany loans	-55.684
Interest received on Money market deposits	-7.819
Other finance income	-1.019
Cost included in the net interest paid but should be reduced for the interest cover	
Interest cost relating to pension	6.700
Facility non-recurring fees	9.245
Other finance cost	0.153
Net interest paid	-243.803

Table 4I: Financial derivatives

This table provides an analysis of our portfolio of financial derivatives.

Line description	Financial derivatives – Total									
	Nominal value by maturity (net) at 31 March				Total value at 31 March		Total accretion at 31 March	Interest rate		RAG 4 ref
Years	0 to 1	1 to 2	2 to 5	Over 5	Nominal value (net)	Mark to Market		Payable	Receivable	
Units (to 3 dps.)	£m	£m	£m	£m	£m	£m	£m	%	%	
Interest rate swap (sterling)										
Floating to fixed rate	0.000	150.000	0.000	2,100.000	2,250.000	-252.978	0.000	1.933%	4.455%	4I.1
Floating from fixed rate	0.000	0.000	0.000	1,920.902	1,920.902	310.952	0.000	4.454%	1.083%	4I.2
Floating to index linked	0.000	0.000	20.000	500.000	520.000	255.173	145.043	20.139%	4.313%	4I.3
Floating from index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.4
Fixed to index-linked	0.000	940.000	0.000	3,158.901	4,098.901	392.586	781.406	15.683%	4.426%	4I.5
Fixed from index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.6
Index-linked to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.7
Total	0.000	1,090.000	20.000	7,679.803	8,789.803	705.733	926.449			4I.8
Foreign Exchange										
Cross currency swap USD	128.783	200.436	272.573	510.160	1,111.952	-16.890	0.000			4I.9
Cross currency swap EUR	453.230	0.000	1,059.597	1,414.399	2,927.226	51.054	0.000			4I.10
Cross currency swap YEN	0.000	0.000	0.000	153.551	153.551	0.896	0.000			4I.11
Cross currency swap Oher	0.000	143.554	0.000	0.000	143.554	-1.948	0.000			4I.12
Total	582.013	343.990	1,332.170	2,078.110	4,336.283	33.112	0.000			4I.13
Currency interest rate										
Currency interest rate swaps USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.14
Currency interest rate swaps EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.15
Currency interest rate swaps YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.16
Currency interest rate swaps Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.17
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.18
Forward currency contracts										
Forward currency contracts USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.19
Forward currency contracts EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.20
Forward currency contracts YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.21
Forward currency contracts CAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.22

Line description	Financial derivatives – Total									
	Nominal value by maturity (net) at 31 March				Total value at 31 March		Total accretion at 31 March	Interest rate		RAG 4 ref
Years	0 to 1	1 to 2	2 to 5	Over 5	Nominal value (net)	Mark to Market		Payable	Receivable	
Units (to 3 dps.)	£m	£m	£m	£m	£m	£m	£m	%	%	
Forward currency contracts AUD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.23
Forward currency contracts HKD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.24
Forward currency contracts Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.25
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.26
Other financial derivatives										
Other financial derivatives	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.27
Total financial derivatives	582.013	1,433.990	1,352.170	9,757.913	13,126.086	738.845	926.449			4I.28
Financial derivatives – (A) Super-senior swaps with breaks or accretion paydowns										
Interest rate swap (sterling)										
Floating to fixed rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.29
Floating from fixed rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.30
Floating to index linked	0.000	0.000	0.000	500.000	500.000	255.888	137.199	20.247%	4.211%	4I.31
Floating from index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.32
Fixed to index-linked	0.000	0.000	0.000	744.051	744.051	298.670	117.161	21.061%	5.348%	4I.33
Fixed from index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.34
Index-linked to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.35
Total	0.000	0.000	0.000	1,244.051	1,244.051	554.558	254.360			4I.36
Foreign Exchange										
Cross currency swap USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.37
Cross currency swap EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.38
Cross currency swap YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.39
Cross currency swap Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.40
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.41
Currency interest rate										
Currency interest rate swaps USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.42
Currency interest rate swaps EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.43
Currency interest rate swaps YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.44
Currency interest rate swaps Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.45
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.46

Line description	Financial derivatives – Total									
	Nominal value by maturity (net) at 31 March				Total value at 31 March		Total accretion at 31 March	Interest rate		RAG 4 ref
Years	0 to 1	1 to 2	2 to 5	Over 5	Nominal value (net)	Mark to Market		Payable	Receivable	
Units (to 3 dps.)	£m	£m	£m	£m	£m	£m	£m	%	%	
Forward currency contracts										
Forward currency contracts USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.47
Forward currency contracts EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.48
Forward currency contracts YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.49
Forward currency contracts CAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.50
Forward currency contracts AUD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.51
Forward currency contracts HKD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.52
Forward currency contracts Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.53
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.54
Other financial derivatives										
Other financial derivatives	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.55
Total financial derivatives	0.000	0.000	0.000	1,244.051	1,244.051	554.558	254.360			4I.56
Financial derivatives – (B) Pari-passu swaps with breaks or accretion paydowns										
Interest rate swap (sterling)										
Floating to fixed rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.57
Floating from fixed rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.58
Floating to index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.59
Floating from index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.60
Fixed to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.61
Fixed from index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.62
Index-linked to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.63
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.64
Foreign Exchange										
Cross currency swap USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.65
Cross currency swap EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.66
Cross currency swap YEN	0.000	0.000	0.000	153.551	153.551	0.896	0.000			4I.67
Cross currency swap Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.68
Total	0.000	0.000	0.000	153.551	153.551	0.896	0.000			4I.69
Currency interest rate										

Line description	Financial derivatives – Total									
	Nominal value by maturity (net) at 31 March				Total value at 31 March		Total accretion at 31 March	Interest rate		RAG 4 ref
Years	0 to 1	1 to 2	2 to 5	Over 5	Nominal value (net)	Mark to Market		Payable	Receivable	
Units (to 3 dps.)	£m	£m	£m	£m	£m	£m	£m	%	%	
Currency interest rate swaps USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.70
Currency interest rate swaps EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.71
Currency interest rate swaps YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.72
Currency interest rate swaps Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.73
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.74
Forward currency contracts										
Forward currency contracts USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.75
Forward currency contracts EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.76
Forward currency contracts YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.77
Forward currency contracts CAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.78
Forward currency contracts AUD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.79
Forward currency contracts HKD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.80
Forward currency contracts Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.81
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.82
Other financial derivatives										
Other financial derivatives	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.83
Total financial derivatives	0.000	0.000	0.000	153.551	153.551	0.896	0.000			4I.84
Interest rate swap (sterling)										
Financial derivatives – (C) Super-senior swaps without breaks or accretion paydowns										
Floating to fixed rate	0.000	150.000	0.000	2,100.000	2,250.000	-252.978	0.000	1.933%	4.455%	4I.85
Floating from fixed rate	0.000	0.000	0.000	1,920.902	1,920.902	310.952	0.000	4.454%	1.083%	4I.86
Floating to index linked	0.000	0.000	20.000	0.000	20.000	-0.715	7.844	17.432%	6.855%	4I.87
Floating from index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.88
Fixed to index-linked	0.000	940.000	0.000	2,414.850	3,354.850	93.916	664.245	14.490%	4.221%	4I.89
Fixed from index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.90
Index-linked to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.91
Total	0.000	1,090.000	20.000	6,435.752	7,545.752	151.175	672.089			4I.92
Foreign Exchange										
Cross currency swap USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.93

Line description	Financial derivatives – Total									
	Nominal value by maturity (net) at 31 March				Total value at 31 March		Total accretion at 31 March	Interest rate		RAG 4 ref
Years	0 to 1	1 to 2	2 to 5	Over 5	Nominal value (net)	Mark to Market		Payable	Receivable	
Units (to 3 dps.)	£m	£m	£m	£m	£m	£m	£m	%	%	
Cross currency swap EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.94
Cross currency swap YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.95
Cross currency swap Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.96
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.97
Currency interest rate										
Currency interest rate swaps USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.98
Currency interest rate swaps EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.99
Currency interest rate swaps YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.100
Currency interest rate swaps Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.101
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.102
Forward currency contracts										
Forward currency contracts USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.103
Forward currency contracts EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.104
Forward currency contracts YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.105
Forward currency contracts CAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.106
Forward currency contracts AUD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.107
Forward currency contracts HKD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.108
Forward currency contracts Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.109
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.110
Other financial derivatives										
Other financial derivatives	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.111
Total financial derivatives	0.000	1,090.000	20.000	6,435.752	7,545.752	151.175	672.089			4I.112
Financial derivatives – (D) Other swaps										
Interest rate swap (sterling)										
Floating to fixed rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.113
Floating from fixed rate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.114
Floating to index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.115
Floating from index linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.116
Fixed to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.117

Line description	Financial derivatives – Total									
	Nominal value by maturity (net) at 31 March				Total value at 31 March		Total accretion at 31 March	Interest rate		RAG 4 ref
Years	0 to 1	1 to 2	2 to 5	Over 5	Nominal value (net)	Mark to Market		Payable	Receivable	
Units (to 3 dps.)	£m	£m	£m	£m	£m	£m	£m	%	%	
Fixed from index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.118
Index-linked to index-linked	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000%	0.000%	4I.119
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.120
Foreign Exchange										
Cross currency swap USD	128.783	200.436	272.573	510.160	1,111.952	-16.890	0.000			4I.121
Cross currency swap EUR	453.230	0.000	1,059.597	1,414.399	2,927.226	51.054	0.000			4I.122
Cross currency swap YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.123
Cross currency swap Other	0.000	143.554	0.000	0.000	143.554	-1.948	0.000			4I.124
Total	582.013	343.990	1,332.170	1,924.559	4,182.732	32.216	0.000			4I.125
Currency interest rate										
Currency interest rate swaps USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.126
Currency interest rate swaps EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.127
Currency interest rate swaps YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.128
Currency interest rate swaps Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.129
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.130
Forward currency contracts										
Forward currency contracts USD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.131
Forward currency contracts EUR	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.132
Forward currency contracts YEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.133
Forward currency contracts CAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.134
Forward currency contracts AUD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.135
Forward currency contracts HKD	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.136
Forward currency contracts Other	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.137
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.138
Other financial derivatives										
Other financial derivatives	0.000	0.000	0.000	0.000	0.000	0.000	0.000			4I.139
Total financial derivatives	582.013	343.990	1,332.170	1,924.559	4,182.732	32.216	0.000			4I.140

Notes for table 4I

Interest rate payable and receivable for floating leg of derivatives has been determined using 31 March 2023 Sonia plus relevant margins.

Instruments which change from "fixed to index linked" to "floating to index linked" during their life have been classified according to their interest rate characteristics as at 31 March 2023.

Mark to Market is presented from Thames Water's Perspective.

Out-of-the money (liability) positions are presented as positive and in-the-money (asset) positions are presented as negative.

The interest rate in column 'interest rate payable/receivable' for index-linked debt uses a denominator net of accretion paydowns, whilst the accretion element of the interest rate comes from a larger notional (due to accretion paydowns of £730.6 million)

The total mark-to-market figure in Table 4I excludes (i) FX element of the principal of swaps which hedge foreign currency debt; (ii) accretion on inflation-linked swaps; (iii) accrued interest on swaps. The figures in 4V have been presented on the same basis, as stated in 4.67 of the guidelines.

Fair value reconciliation of table 4B to table 4I

	£m
Fair value of swaps as per Table 4B	1,598.196
Add	
Fair value of cross currency swaps included in debt lines fair value figure as foreign currency debt is shown post swap	-55.445
FX on cross currency Swaps	94.754
Accrued interest on Swaps	27.789
Less	
Accretion on Swaps	-926.449
Fair value of swaps as per table 4I/1C	738.845

Table 4J: Base expenditure analysis– water resources and water network+

This table shows our base expenditure for wholesale water split by cost categories.

Line description Units: £m	Water resources	Water network+					
		Raw water distribution	Raw water storage	Water treatment	Treated water distribution	Total	RAG4 Ref
Power	26.120	1.628	0.000	31.328	51.172	110.248	4J.1
Income treated as negative expenditure	-0.250	0.001	0.000	0.097	0.009	-0.143	4J.2
Bulk Supply/Bulk discharge	4.894	0.000	0.000	0.000	0.000	4.894	4J.3
Renewals expensed in year (infrastructure)	0.000	0.000	0.000	0.000	94.160	94.160	4J.4
Renewals expensed in year (non-infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	4J.5
Other operating expenditure	18.547	3.287	0.000	85.502	121.511	228.847	4J.6
Local authority and Cumulo rates	3.324	5.735	0.000	4.750	57.515	71.324	4J.7
Canal & River Trust abstraction charges/ discharge consents	4.400	0.000	0.000	0.000	0.000	4.400	4J.8
Environment Agency / NRW abstraction charges/ discharge consents	18.931	0.000	0.000	0.000	0.000	18.931	4J.9
Other abstraction charges/ discharge consents	0.248	0.000	0.000	0.000	0.000	0.248	4J.10
Costs associated with Traffic Management Act	0.000	0.000	0.000	0.000	32.451	32.451	4J.11
Costs associated with lane rental schemes	0.000	0.000	0.000	0.000	2.712	2.712	4J.12
Statutory water softening	0.000	0.000	0.000	0.000	0.000	0.000	4J.13
Total base operating expenditure	76.214	10.651	0.000	121.677	359.530	568.072	4J.14
Maintaining the long-term capability of the assets - infra	6.076	6.507	0.000	-0.960	190.610	202.233	4J.15
Maintaining the long-term capability of the assets - non-infra	11.137	2.042	0.000	88.033	160.696	261.908	4J.16
Total base capital expenditure	17.213	8.549	0.000	87.073	351.306	464.141	4J.17
Projects incurring costs associated with Traffic Management Act (nr to 0 DPs)	0	0	0	0	89,202	89,202	4J.18

Table 4K: Base expenditure – wastewater network + and bioresources

This table shows our base expenditure for wholesale wastewater split by cost categories.

Line description Units: £m	Expenditure in report year									RAG 4 Ref
	Wastewater network+					Bioresources			Total	
	Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge Transport	Sludge Treatment	Sludge Disposal		
Power	20.108	3.481	0.604	95.452	9.220	0.016	-13.862	1.258	116.277	4K.1
Income treated as negative expenditure	-0.007	-0.001	0.000	-0.007	0.000	0.000	-17.682	-0.811	-18.508	4K.2
Bulk Supply/Bulk discharge	0.000	0.000	0.000	2.966	0.000	0.000	0.000	0.000	2.966	4K.3
Renewals expensed in year (infrastructure)	62.484	10.903	1.805	0.000	0.000	0.000	0.000	0.000	75.192	4K.4
Renewals expensed in year (non-infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4K.5
Other operating expenditure	89.422	13.854	3.450	101.770	4.812	7.312	49.786	38.965	309.371	4K.6
Local authority and Cumulo rates	0.000	0.000	0.000	43.670	0.000	0.000	0.450	0.049	44.169	4K.7
Canal & River Trust abstraction charges/ discharge consents	0.800	0.140	0.023	0.000	0.000	0.000	0.000	0.000	0.963	4K.8
EA / NRW abstraction charges/ discharge consents	1.239	0.183	0.031	2.367	0.000	0.021	1.391	0.054	5.286	4K.9
Other abstraction charges/ discharge consents	0.402	0.070	0.012	0.055	0.000	0.004	0.080	0.000	0.623	4K.10
Costs associated with Traffic Management Act	0.539	0.094	0.016	0.000	0.000	0.000	0.000	0.000	0.649	4K.11
Costs associated with lane rental schemes	0.291	0.051	0.008	0.000	0.000	0.000	0.000	0.000	0.350	4K.12
Costs associated with Industrial emissions directive	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.000	0.053	4K.13
Total base operating expenditure	175.278	28.775	5.949	246.273	14.032	7.353	20.216	39.515	537.391	4K.14
Maintaining the long-term capability of the assets - infra	124.394	0.006	0.096	0.000	0.000	0.366	0.000	0.000	124.862	4K.15
Maintaining the long-term capability of the assets - non-infra	66.660	3.878	0.996	156.474	0.001	0.193	76.015	15.285	319.502	4K.16
Total base capital expenditure	191.054	3.884	1.092	156.474	0.001	0.559	76.015	15.285	444.364	4K.17
Projects incurring costs associated with Traffic Management Act (nr to 0 DPs)	5,925	1,034	171	0	0	0	0	0	7,130	4K.18
Power	20.108	3.481	0.604	95.452	0.000	0.016	-4.642	1.258	116.277	4K.19
Income treated as negative expenditure	-0.007	-0.001	0.000	-0.007	0.000	0.000	-17.682	-0.811	-18.508	4K.20

Table 4L: Enhancement expenditure - water resources and water network+

We've chosen to publish the regulatory table 4L as a separate document to this Annual Performance Report due to the size of the table.

You can view this table on our website.

Notes to table 4L

Supply-Demand Management

The development of the regional water resources plan (WRSE) and WRMP24 process continues. We published our draft WRMP in December 2022 and carried out a 14 week consultation period receiving over 1600 representations. We are now on-track for the publication the Statement of Response to all representation on the draft WRMP, and our revised draft WRMP plan at the end of August 2023. We are also working in collaboration with four other water companies to publish five strategic regional water resources solutions; these are a reservoir, South East Strategic Resource Option, three transfers, Severn to Thames Transfer, Thames to Southern Transfer and Thames to Affinity Transfer, and London Water Recycling.

We published our Gate 2 reports against the required guidance in November 2022 covering the detailed feasibility, concept design, environmental benefits and impacts, and other requirements. All five strategic option have continued development to Gate 3 to meet the requirements set out by Ofwat ad aligned to the WRSE / WRMP plans. The final decision for Gate 2 has confirmed the continuation of all five. Our Gate 2 spend was seen to be efficient. We have continued development of supply side options and development of an interconnector main in our Guildford WRZ.

Smart metering

Our current strategy is to install AMI smart meters in our optant, progressive and replacement programmes. These meters can be read in AMR or AMI modes when an LCE is installed, in areas of fixed network coverage. All meters installed are therefore classified as 'smart' based on the definition outlined by Ofwat. However, there will be instances when a non-household (NHH) customer may request a meter that allows third-party logger compatibility through the NHH Retail market, or for our HH customers request a 'basic' meter for religious grounds.

The metering programme was impacted by the global shortage of microprocessors which caused, and continues to affect, meter stock availability. The metering programme has been accordingly reprofiled & alternative technological solutions for delivering smart meters in the Thames Valley region are being explored

Additional lines

The following additional lines have been included in comparison to the Ofwat proforma table:

Feasibility assessments -> These relate to impact studies performed within developer services, which in the previous AMP were included within 'New Development & Growth" but disaggregated going forward for transparency

Improving the performance of London water networks: This relates to an additional FD conditional allowance, over and above the capital maintenance mains replacement programme, to improve the performance of the London water network and improve customer service.

Unplanned Outage improvement: This relates to an FD allowance, over and above the base allowance, for improvements to unplanned outage performance and provide resilient supplies to

customers. This investment is required to achieve the stretching performance commitment target of 2.34% unplanned outage in 2024-25.

Table 4M: Enhancement expenditure - wastewater network+ and bioresources

We've chosen to publish the regulatory table 4M as a separate document to this Annual Performance Report due to the size of the table.

You can view this table on our website.

Notes to table 4M

The following additional lines have been included in comparison to the Ofwat proforma table:

Feasibility assessments: These relate to impact studies performed within developer services, which have historically been included within 'New Development & Growth" but disaggregated going forward for transparency.

Lee Tunnel: This line was added to capture and report the expenditure on the Lee Tunnel project separately in order to be consistent with previous AMP's annual performance reporting submissions.

Enhanced sewer cleaning programme (1200km): Sewer cleaning programme contributes to the improved performance of our network with respect to blockage avoidance and flooding alleviation and such has been classified as an enhancement expenditure.

New development and growth -> This line was added to capture and report the expenditure on new development and growth that cannot be reclaimed through infrastructure charges which is now reported separately in tables 4N, 4O & 4P.

Table 4N: Developer services expenditure– water resources and water network+

Line description Units: £m	Water network+			RAG 4 Ref
	Treated water distribution			
	Capex	Opex	Totex	
New connections	31.313	2.227	33.540	4N.1
Requisition mains	10.190	1.072	11.262	4N.2
Infrastructure network reinforcement	11.463	0.262	11.725	4N.3
s185 diversions	3.130	0.439	3.569	4N.4
Other price-controlled activities	0.000	0.000	0.000	4N.5
Total developer services expenditure	56.096	4.000	60.096	4N.6

Notes to table 4N

This table shows our developer services expenditure for wholesale water split by cost categories.

Capital expenditure reported in this table includes asset payments made to self-lay providers/developers. These relate to work quoted under Charging Arrangements prior to April 2020 where the Discounted Aggregate Deficit ("DAD") model was used to determine the value of Thames Water contributions to these schemes.

A review of our network reinforcement policy took place following Ofwat's comments in the PR24 methodology that our definition was too narrow and confirming that all foreseeable developer applications can be recovered through infrastructure charges.

We have applied the new policy to Network Reinforcement schemes back to 2018-19 and the resulting reclassification of expenditure to Network Reinforcement has been included in the 2022-23 reported expenditure in table 2J.

These total £5m and will be a reconciling difference to this table 4N as it only reports expenditure in the financial year. This table excludes the fair value of adopted assets.

Table 4O: Developer services expenditure– wastewater network+ and bioresources

This table shows our developer services expenditure for wholesale wastewater split by cost categories.

Line description Units: £m	Wastewater network+					Total	RAG 4 Ref
	Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment		
New connections	1.040	0.000	0.000	0.000	0.000	1.040	4O.1
Requisition sewers	0.769	-0.033	0.000	0.000	0.000	0.736	4O.2
Infrastructure network reinforcement	9.132	0.000	0.000	0.000	0.000	9.132	4O.3
s185 diversions	0.307	0.010	0.000	0.000	0.000	0.317	4O.4
Other price-controlled activities	0.000	0.000	0.000	0.000	0.000	0.000	4O.5
Total developer services capex	11.248	-0.023	0.000	0.000	0.000	11.225	4O.6
New connections	0.110	0.001	0.000	0.000	0.000	0.111	4O.7
Requisition sewers	0.081	0.001	0.000	0.000	0.000	0.082	4O.8
Infrastructure network reinforcement	0.253	0.003	0.000	0.000	0.000	0.256	4O.9
s185 diversions	0.035	0.000	0.000	0.000	0.000	0.035	4O.10
Other price-controlled activities	0.443	0.004	0.000	0.000	0.000	0.447	4O.11
Total developer services opex	0.922	0.009	0.000	0.000	0.000	0.931	4O.12
Total developer services expenditure	12.170	-0.014	0.000	0.000	0.000	12.156	4O.13

Notes to table 4O

A review of our network reinforcement policy took place following Ofwat's comments in the PR24 methodology that our definition was too narrow and confirming that all foreseeable developer applications can be recovered through infrastructure charges.

We have applied the new policy to Network Reinforcement schemes back to 2018-19 and the resulting reclassification of expenditure to Network Reinforcement has been included in the 2022-23 reported expenditure in table 2J. These total £3m and will be a reconciling difference to this table 4O as it only reports expenditure in the financial year.

This table excludes the fair value of adopted assets.

Table 4P: Expenditure on non-price control diversions for the 12 months ended 31 March 2023

This table shows our expenditure on diversions not covered by a price control.

Line description Units: £m	Water resources	Water network+	Wastewater network+	Total	RAG 4 Ref
Capex associated with NSWRA[76] diversions	0.000	1.621	0.142	1.763	4P.1
Capex associated with other non-price control diversions	0.000	3.923	11.945	15.868	4P.2
Other developer services non-price control capex	0.000	8.047	0.000	8.047	4P.3
Developer services non-price control capex	0.000	13.591	12.087	25.678	4P.4
Opex associated with NSWRA diversions	0.000	0.078	0.028	0.106	4P.5
Opex associated with other non-price control diversions	0.000	0.207	0.115	0.322	4P.6
Other developer services non-price control opex	0.000	1.366	1.106	2.472	4P.7
Developer services non-price control opex	0.000	1.651	1.249	2.900	4P.8
Costs associated with NSWRA diversions	0.000	1.699	0.170	1.869	4P.9
Costs associated with other non-price control diversions	0.000	4.130	12.060	16.190	4P.10
Other developer services non-price control totex	0.000	9.413	1.106	10.519	4P.11
Developer services non-price control totex	0.000	15.242	13.336	28.578	4P.12

This table includes all expenditure attributable to work delivered under the High-Speed Rail (London-West Midlands) Act 2017, which may include an element of new asset.

This includes £0.7m of operating expenditure disclosed within 'Other Developer Services Non-Price Control Totex' attributable to work performed which will ultimately not result in diversionary activity taking place.

This table excludes the fair value of adopted assets.

[76] *The New Road and Street Works Act (NRSWA) provides a legal framework for street and highway works in the UK.*

Table 4Q: Developer services – New connections, properties and mains

This table reports on the new connections, properties and new mains laid within the developer services part of the business split by water and wastewater.

Line description Units: nr	Water	Wastewater	Total	RAG 4 Ref
New connections (residential – excluding NAVs)	11,467	1,646	13,113	4Q.1
New connections (business – excluding NAVs)	919	428	1,347	4Q.2
Total new connections served by incumbent	12,386	2074	14,460	4Q.3
New connections – SLPs	6,021			4Q.4
New properties (residential - excluding NAVs)	22,110	41,760	63,870	4Q.5
New properties (business - excluding NAVs)	1,023	837	1,860	4Q.6
Total new properties served by incumbent	23,133	42,597	65,730	4Q.7
New residential properties served by NAVs	1,208	1,909	3,117	4Q.8
New business properties served by NAVs	10	10	20	4Q.9
Total new properties served by NAVs	1,218	1,919	3,137	4Q.10
Total new properties	24,351	44,516	68,867	4Q.11
New properties – SLP connections	6,021			4Q.12
Length of new mains (km) - requisitions	10			4Q.13
Length of new mains (km) - SLPs	43			4Q.14

Table 4R: Connected properties, customers and population

This table reports our connected properties, and our customer and population numbers (in 000s).

Line description Units: nr (000s)	Unmeasured	Measured	Total	Voids	RAG 4 Ref
Residential water only customers	25.817	24.621	50.438	1.755	4R.1
Residential wastewater only customers	664.064	1,372.285	2,036.349	66.831	4R.2
Residential water and wastewater customers	1,701.495	1,922.842	3,624.337	126.092	4R.3
Total residential customers	2,391.376	3,319.748	5,711.124	194.677	4R.4
Business water only customers	1.067	12.776	13.843	4.340	4R.5
Business wastewater only customers	14.110	62.459	76.569	15.970	4R.6
Business water & wastewater customers	28.697	134.373	163.070	30.381	4R.7
Total business customers	43.874	209.608	253.482	50.691	4R.8
Total customers	2,435.250	3,529.356	5,964.606	245.368	4R.9

Line description	Water			Wastewater			RAG 4
Units: Nr (000s)	Unmeasured	Measured	Total	Unmeasured	Measured	Total	Ref
Residential properties billed	1,727.312	1,947.463	3,674.775	2,365.559	3,295.127	5,660.686	4R.10
Residential void properties			127.847			192.922	4R.11
Total connected residential properties			3,802.622			5,853.608	4R.12
Business properties billed	29.763	147.149	176.912	42.808	196.825	239.633	4R.13
Business void properties			34.721			46.355	4R.14
Total connected business properties			211.633			285.988	4R.15
Total connected properties			4,014.255			6,139.596	4R.16

Line description Units: nr (000s)	Water Unmeasured					
	No meter	Basic meter	AMR meter	AMI meter (capable)	AMI meter (active)	Total
Property and meter numbers - at end of year (31 March)						
Total new residential properties connected in year						0.000
Total number of new business properties connections						0.000
Residential properties billed at year end	1,685.846					1,685.846
Residential properties unbilled at year end						
Residential void properties at year end						55.342
Total connected residential properties at year end						1,741.188
Business properties billed at year end	29.025	0.000	0.000	0.000	0.000	29.025
Business properties unbilled at year end						
Business void properties at year end						9.493
Total connected business properties at year end						38.518
Total connected properties at year end						1,779.706

Line description Units: Nr (000s)	Water Measured					
	No meter	Basic meter	AMR meter	AMI meter (capable)	AMI meter (active)	Total
Total new residential properties connected in year			22.110			22.110
Total number of new business properties connections			1.023			1.023
Residential properties billed at year end		1,201.267	203.230	14.085	593.591	2,012.173
Residential properties unbilled at year end						
Residential void properties at year end						67.527
Total connected residential properties at year end						2,079.700
Business properties billed at year end		98.839		15.662	31.338	145.839
Business properties unbilled at year end						
Business void properties at year end						26.249
Total connected business properties at year end						172.088
Total connected properties at year end						2,251.788

Line description	Water				RAG 4 Ref
	Unbilled			Total	
	Uneconomic to bill	Other	Total		
Total new residential properties connected in year				22.110	4R.17
Total number of new business properties connections				1.023	4R.18
Residential properties billed at year end				3,698.019	4R.19
Residential properties unbilled at year end	6.263		6.263	6.263	4R.20
Residential void properties at year end				122.869	4R.21
Total connected residential properties at year end				3,827.151	4R.22
Business properties billed at year end				174.864	4R.23
Business properties unbilled at year end			0.000	0.000	4R.24
Business void properties at year end				35.742	4R.25
Total connected business properties at year end				210.606	4R.26
Total connected properties at year end				4,037.757	4R.27

Line description [77]	Water	Wastewater	RAG 4 Ref
Resident population	10,379.727	15,626.994	4R.28
Non-resident population (wastewater)		379.045	4R.29

Household population data	Water			RAG 4 Ref
	Resident population	Non-resident population	Total	
Household population	10,275.884	0.000	10,275.884	4R.30
Household measured population (water only)	5,794.741	0.000	5,794.741	4R.31
Household unmeasured population (water only)	4,481.142	0.000	4,481.142	4R.32

[77] *Additional commentary on 4R.28 and 4R.29 can be found on the next page.*

Additional commentary on population data

Line 28: Water resident population

We have made a change to our methodology as the latest Office for National Statistics ("ONS") estimates are based on the census conducted on 21 March 2021; this was during a COVID-19 lockdown which affected the resident and transient populations in our region, particularly in London. The ONS have advised us whilst the 2021 census is viewed with a high degree of accuracy at a national level, the impact of COVID-19 could have led to a miscalculation of the resident population, particularly in London and other urban areas where a fair amount of the population have some degree of mobility.

The ONS state on their website that the 2021 mid-year estimate ("MYE") "will not reflect a non-coronavirus pandemic usually resident population in England and Wales". We have therefore decided to use the same base resident population data as used at AR22 (ONS mid-year estimate 2020) plus predicted growth from mid-2020 to April 2023. We aim to return to using the standard ONS MYE from next APR when further census 2021 data has been released.

The total resident population consists of five data sources:

1. 'Official' resident population – As mentioned above, our usual methodology would take the ONS mid-year population of our wastewater area (by totalling all of the census output area populations within our boundary). Due to issues with the Census 2021, we have instead used the AR22 resident population (based on ONS MYE 2020).
2. Projected Growth – Projected growth from the latest ONS MYE to April of the reporting year, calculated by Edge Analytics (demographic data analysis specialists), based on predicted housing growth.
3. Irregular Migrants – This typically refers to those who are not entitled to reside there, either because they have never had a legal residence permit or because they have overstayed their time-limited permit. The estimate of irregular migrants within our wastewater area has been calculated by Edge Analytics based on published research.
4. Short-term residents – This population is defined as anyone living in an area, who was born outside of the UK and intended to stay for a period of between 3 and 12 months. The estimate of short-term residents within our wastewater area has been calculated by Edge Analytics based on the 2011 census.
5. Ukrainian Refugees – Following the Russian invasion of Ukraine in February 2022, the UK government created a series of new visa schemes to support Ukrainian's seeking refuge from the war in the UK. The estimate of Ukrainian refugees within our wastewater area has been calculated by Edge Analytics based on the number of visas issued under the Ukraine Family and Sponsorship Schemes.

Line 29: Wastewater Non-resident population

The non-resident or annual average holiday and tourist population connected to our sewerage system is the sum of Domestic visitor nights and Foreign visitor nights. Both of these have been estimated by Edge Analytics.

For the last two APRs, we adjusted these estimates to take account of the impact of COVID-19 lockdowns and restrictions on tourism. We have not made an adjustment for APR23 as, since February 2022, occupancy rates have returned to the 2016-2018 average, even exceeding this average in October and November 2022.

Definitions of visitor nights

Domestic visitor nights: the population of domestic overnight visitors in our wastewater area. Edge Analytics have used the Great Britain Tourism Survey ("GBTS"), which provides a 3-year (2016-2018) average annual count of domestic visitor nights for each Local Authority area. The GBTS was suspended in March 2020 due to the COVID-19 pandemic, therefore no data is available for 2020 and limited data is available for 2021. Data for 2022 is yet to be published. To account for the change in visitors since 2016-2018, regional adjustment factors have been applied using the accommodation occupancy statistics published by Visit Britain, comparing the 2016-2018 annual average occupancy to the 2022 annual average occupancy.

Foreign visitor nights: the population of foreign overnight visitors in our wastewater area. The International Passenger Survey ("IPS") provides a count of foreign visitor nights in 2016, 2017 and 2018 for each sub-region of the UK. The 2016-2018 average annual visitor count from the IPS has been adjusted to reflect the post COVID-19 situation. An inbound visitor forecast, generated by Visit Britain, estimated that the number of inbound visits to the UK in 2022 totalled 29.7m, 74% of the 2016-2018 average levels.

Table 4S: Green recovery expenditure– water resources and water network+

Line description Units: £m	Expenditure in report year						Cumulative expenditure on schemes completed in the report year						
	Water resources	Water network+				Total	Water resources	Water network+				Total	RAG 4 Ref
		Raw water transport	Raw water storage	Water treatment	Treated water distribution			Raw water transport	Raw water storage	Water treatment	Treated water distribution		
Green recovery programme													
Smart metering capex	0.000	0.000	0.000	0.000	1.062	1.062	0.000	0.000	0.000	0.000	1.062	1.062	4S.1
Smart metering opex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4S.2
Smart metering totex	0.000	0.000	0.000	0.000	1.062	1.062	0.000	0.000	0.000	0.000	1.062	1.062	4S.3
Total programme capex	0.000	0.000	0.000	0.000	1.062	1.062	0.000	0.000	0.000	0.000	1.062	1.062	4S.13
Total programme opex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4S.14
Total programme expenditure	0.000	0.000	0.000	0.000	1.062	1.062	0.000	0.000	0.000	0.000	1.062	1.062	4S.15

Table 4T: Green recovery expenditure– wastewater network+ and bioresources

This table is only applicable for companies with wastewater network+ and bioresources green recovery projects, and therefore has not been included within this report.

Table 4U: Impact of Green recovery on RCV

Line description Units: £m	12 months ended 31 March 2023					Price control period to date					RAG 4 Ref
	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	Water resources	Water network plus	Wastewater network plus	Bio-resources	TTT	
Approved bid	0.000	23.811	0.000		0.000	0.000	26.989	0.000		0.000	4U.1
Actual totex	0.000	1.062	0.000		0.000	0.000	1.062	0.000		0.000	4U.2
Variance	0.000	-22.749	0.000		0.000	0.000	-25.927	0.000		0.000	4U.3
Variance due to timing of expenditure	0.000	-22.749	0.000		0.000	0.000	-25.927	0.000		0.000	4U.4
Variance due to efficiency	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	4U.5
Customer cost sharing rate - outperformance	90.00%	90.00%	90.00%		90.00%	90.00%	90.00%	90.00%		90.00%	4U.6
Customer cost sharing rate - underperformance	25.00%	25.00%	25.00%		42.20%	25.00%	25.00%	25.00%		42.20%	4U.7
Customer share of totex - outperformance	0.000	-20.474	0.000		0.000	0.000	-23.334	0.000		0.000	4U.8
Customer share of totex - underperformance	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	4U.9
Company share of totex - outperformance	0.000	-2.275	0.000		0.000	0.000	-2.593	0.000		0.000	4U.10
Company share of totex- underperformance	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	4U.11
Increase / decrease in shadow RCV	0.000	-19.412	0.000		0.000	0.000	-22.272	0.000		0.000	4U.12
In period funding	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	4U.13
Net increase / decrease in shadow RCV	0.000	-19.412	0.000		0.000	0.000	-22.272	0.000		0.000	4U.14

Table 4V: Mark-to-market of financial derivatives analysed based on payment dates

Line description	Units	DPs	Derivatives - Analysed by earliest payment date				Derivatives - Analysed by expected maturity date				RAG 4 ref
			Net settled	Gross Settled outflows	Gross Settled inflows	Total	Net settled	Gross Settled outflows	Gross Settled inflows	Total	
Due within one year	£m	3	0.000	573.134	-573.362	-0.228	0.000	573.134	-573.362	-0.228	4V.1
Between one and two years	£m	3	18.212	332.674	-338.760	12.126	18.212	332.674	-338.760	12.126	4V.2
Between two and three years	£m	3	-0.715	215.626	-214.730	0.181	-0.715	0.000	0.000	-0.715	4V.3
Between three and four years	£m	3	0.000	245.426	-247.065	-1.639	0.000	245.426	-247.065	-1.639	4V.4
Between four and five years	£m	3	0.000	1,091.634	-1,076.520	15.114	0.000	1,091.634	-1,076.520	15.114	4V.5
After five years	£m	3	688.235	2,068.966	-2,043.910	713.291	688.235	2,284.592	-2,258.640	714.187	4V.6
Total	£m	3	705.732	4,527.460	-4,494.347	738.845	705.732	4,527.460	-4,494.347	738.845	4V.7

Notes to table 4V

The total mark-to-market figures in Table 4V have been presented on the same basis as in Table 4I, as stated in 4.67 of the guidelines. The total mark-to-market figure excludes (i) FX element of the principal of swaps which hedge foreign currency debt; (ii) accretion on inflation-linked swaps; (iii) accrued interest on swaps.

These adjustments have been implemented as follows:(i) FX element has been adjusted on the foreign currency leg of the cross currency swap (ii) Accretion has been applied to the pay leg of the inflation-linked swaps(iii) Accrued interest has been adjusted on the Gross settled outflows or inflows as relevant for the cross currency swaps, for other swaps these have been adjusted on the Net settled section.

Cross currency swaps: All settled on a Gross basis, with the credit adjustment element of the mark-to-market either applied to the receive leg to reduce the market value receivable or to the pay leg to reduce the market value owed, depending on signage.

Interest rate swaps: Interest payment dates may not match in every case between pay leg and receive leg, but there is no final principal exchange at maturity. Our valuation system includes a principal exchange at maturity in reporting the valuation of each leg, which nets out in the overall mark-to-market value. For this reason we present all of our interest rate swaps as settled on a Net Basis.

Index-linked swaps: Interest payment dates may not match in every case between pay leg and receive leg, but there is no final principal exchange at maturity aside from the payment of inflation accretion. Our valuation system includes a principal exchange at maturity in reporting the valuation of each leg, which nets out in the overall mark-to-market value. For this reason we present all of our index-linked swaps as settled on a Net Basis.

Out-of-the money (liability) positions are presented as positive and in-the-money (asset) positions are presented as negative.

Table 4W: Defined Benefit Pension Scheme – Additional Information

Line description	Units	DPs	Defined benefit pension schemes		RAG 4 ref
			Pension scheme 1	Pension scheme 2	
Scheme name	Text	n/a	Thames Water Pension Scheme ("TWPS")	Thames Water Mirror Image Pension Scheme ("TWMIPS")	4W.1
Scheme status	Text	n/a	Closed to new members and closed to future accrual as of 31 March 2021	Closed to new members	4W.2
Scheme valuation under IAS/IFRS/FRS					
Scheme assets	£m	3	1,145.500	538.100	4W.3
Scheme liabilities	£m	3	1,327.500	532.100	4W.4
Scheme surplus / (deficit) Total	£m	3	-182.000	6.000	4W.5
Scheme surplus / (deficit) Appointed business	£m	3	0.000	0.000	4W.6
Pension deficit recovery payments	£m	3	0.000	0.000	4W.7
Scheme valuation under part 3 of Pensions Act 2004					
Scheme funding valuation date	Date	n/a	31/03/2019	31/03/2019	4W.8
Assets	£m	3	1,516.600	805.300	4W.9
Technical Provisions	£m	3	1,732.500	738.300	4W.10
Scheme surplus / (deficit)	£m	3	-215.900	67.000	4W.11
Discount rate assumptions	Text	n/a	Gilt yield curve + 1%	Fixed-interest gilt yield curve plus 0.57% p.a. at 31 March 2019 declining gradually to plus 0.5% p.a. at 31 March 2022	4W.12
Recovery plan (where applicable)					
Recovery Plan Structure	Text	n/a	£17.9 P.A from 2025 to 2027	N/A	4W.13
Recovery plan end date	Date	n/a	2027	N/A	4W.14
Asset Backed Funding (ABF) arrangements	Text	n/a	N/A - no ABF arrangements.	N/A - no ABF arrangements.	4W.15
Responsibility for ABF arrangements	Text	n/a	N/A - no ABF arrangements.	N/A - no ABF arrangements.	4W.16

Section 5
Additional regulatory information – water resources

Table 5A: Water resources asset and volumes data

This table reports a breakdown of assets and their volumes for the water resources price control.

Line description	Units	Input	RAG 4 Ref
Water from impounding reservoirs	Ml/d	72.74	5A.1
Water from pumped storage reservoirs	Ml/d	1,914.30	5A.2
Water from river abstractions	Ml/d	68.14	5A.3
Water from groundwater works, excluding managed aquifer recharge water supply schemes	Ml/d	688.89	5A.4
Water from artificial recharge water supply schemes	Ml/d	39.67	5A.5
Water from aquifer storage and recovery water supply schemes	Ml/d	0.00	5A.6
Water from saline abstractions	Ml/d	0.00	5A.7
Water from water reuse schemes	Ml/d	0.00	5A.8
Number of impounding reservoirs	nr	1	5A.9
Number of pumped storage reservoirs	nr	21	5A.10
Number of river abstractions	nr	14	5A.11
Number of groundwater works excluding managed aquifer recharge water supply schemes	nr	111	5A.12
Number of artificial recharge water supply schemes	nr	33	5A.13
Number of aquifer storage and recovery water supply schemes	nr	0	5A.14
Number of saline abstraction schemes	nr	0	5A.15
Number of reuse schemes	nr	0	5A.16
Total number of sources	nr	180	5A.17
Total number of water reservoirs	nr	22	5A.18
Total volumetric capacity of water reservoirs	Ml	218,347	5A.19
Total number of intake and source pumping stations	nr	171	5A.20
Total installed power capacity of intake and source pumping stations	kW	42,081	5A.21
Total length of raw water abstraction mains and other conveyors	km	11.21	5A.22
Average pumping head – raw water abstraction	m.hd	9.46	5A.23
Energy consumption - water resources (MWh)	MWh	135,196.663	5A.24
Total number of raw water abstraction imports	nr	1	5A.25
Water imported from 3rd parties to raw water abstraction systems	Ml/d	0.00	5A.26
Total number of raw water abstraction exports	nr	0	5A.27
Water exported to 3rd parties from raw water abstraction systems	Ml/d	0.00	5A.28
Water resources capacity (measured using water resources yield)	Ml/d	3171.41	5A.29
Total number of completed investigations (WINEP/NEP), cum. for AMP		9.00	5A.30

Additional commentary on water resources asset and volumes data

Lines 12 – 14: Baseload groundwater, artificial recharge and aquifer storage and recovery water supply schemes

There have been no changes to the methodology this year. However, the number of groundwater works in use increased from 101 to 111 due to supply challenges during the drought. Similarly, the number of artificial recharge schemes increased from 6 to 33. We do not have any Aquifer Storage and Recovery sources.

Line 22: Total length of raw water abstraction mains and other conveyors

Raw water abstraction mains from river to reservoir are not digitised in our Geographic Information System ("GIS").

The process to estimate this length is the same as last year. In lieu of the digitised position, the raw water reservoirs were identified from the SAP asset register. For each one, the shortest straight-line length was measured using the "measure distance" functionality in the GIS tool to record the distance between the nearest river and the edge of the reservoir. The lengths were then summed to provide the reported figure.

Line 23: Average pumping head ("APH") – raw water abstraction

There have been no significant changes to the methodology this year.

%	Source
83%	measured data (flow and lift (suction and/or delivery head)
16%	partially measured data where either the flow or head is measured (principal estimation method is to revert to last year's head value)
1%	water treatment works flow data and static head estimates

99% of sites contributing to APH have measured volumes and/or lift.

Table 5B: Water resources operating cost analysis

This table shows our operating expenditure for water resources split by source categories

Line description Units: £m	Impounding Reservoir	Pumped Storage	River Abstractions	Groundwater, excluding MAR water supply schemes
Power	0.940	18.482	0.488	6.156
Income treated as negative expenditure	-0.009	-0.177	-0.005	-0.059
Abstraction charges/ discharge consents	0.000	0.000	18.198	5.133
Bulk supply	0.176	3.463	0.092	1.154
Renewals expensed in year (Infrastructure)	0.000	0.000	0.000	0.000
Renewals expensed in year (Non-Infrastructure)	0.000	0.000	0.000	0.000
Other operating expenditure excluding renewals	0.677	13.299	0.351	4.430
Local authority and Cumulo rates	0.120	2.352	0.062	0.783
Total operating expenditure (excluding 3rd party)	1.904	37.419	19.186	17.597

Line description Units: £m	Artificial Recharge water supply schemes	Aquifer Storage and Recovery water supply schemes	Other	Total	RAG 4 Ref
Power	0.052	0.000	0.000	26.118	5B.1
Income treated as negative expenditure	-0.001	0.000	0.000	-0.251	5B.2
Abstraction charges/ discharge consents	0.000	0.000	0.000	23.331	5B.3
Bulk supply	0.010	0.000	0.000	4.895	5B.4
Renewals expensed in year (Infrastructure)	0.000	0.000	0.000	0.000	5B.5
Renewals expensed in year (Non-Infrastructure)	0.000	0.000	0.000	0.000	5B.6
Other operating expenditure excluding renewals	0.038	0.000	0.000	18.795	5B.7
Local authority and Cumulo rates	0.007	0.000	0.000	3.324	5B.8
Total operating expenditure (excluding 3rd party)	0.106	0.000	0.000	76.212	5B.9

Section 6
Additional regulatory information – water network plus

Table 6A: Raw water transport, raw water storage and water treatment data

This table reports raw water transport and storage data along with the breakdown of water treatment works ("WTWs") by treatment type and size. It also contains additional data associated with the water treatment business area.

Line description	Units	Input	RAG 4 Ref
Total number of balancing reservoirs	nr	4	6A.1
Total volumetric capacity of balancing reservoirs	Ml	437	6A.2
Total number of raw water transport stations	nr	11	6A.3
Total installed power capacity of raw water transport pumping stations	kW	12,868	6A.4
Total length of raw water transport mains and other conveyors	km	262.42	6A.5
Average pumping head ~ raw water transport	m.hd	9.60	6A.6
Energy consumption – raw water transport (MWh)	MWh	5,326.394	6A.7
Total number of raw water transport imports	nr	0	6A.8
Water imported from 3rd parties to raw water transport systems	Ml/d	0.00	6A.9
Total number of raw water transport exports	nr	2	6A.10
Water exported to 3rd parties from raw water transport systems	Ml/d	106.46	6A.11
Total length of raw and pre-treated (non-potable) water transport mains for supplying customers	km	0.00	6A.12

Water treatment - treatment type analysis	Surface water		Ground water		RAG 4 Ref
	Water treated Ml/d	Number of works nr.	Water treated Ml/d	Number of works nr	
All simple disinfection works	0.00	0	0.00	0	6A.13
W1 works	0.00	0	0.00	0	6A.14
W2 works	0.00	0	204.37	35	6A.15
W3 works	0.00	0	176.44	14	6A.16
W4 works	18.00	1	182.17	27	6A.17
W5 works	1921.21	10	111.09	5	6A.18
W6 works	0.00	1	0.00	0	6A.19

	% of total DI	Number of works	RAG 4 Ref
WTWs in size band 1	0.5	11	6A.20
WTWs in size band 2	0.9	12	6A.21
WTWs in size band 3	2.9	16	6A.22
WTWs in size band 4	5.9	19	6A.23
WTWs in size band 5	8.0	11	6A.24
WTWs in size band 6	6.7	5	6A.25
WTWs in size band 7	10.9	4	6A.26
WTWs in size band 8	64.1	4	6A.27

Water treatment - other information	Units	Input	RAG 4 Ref
Peak week production capacity	Ml/d	3403.90	6A.28
Peak week production capacity having enhancement expenditure for grey solution improvements to address raw water quality deterioration	Ml/d	0.00	6A.29
Peak week production capacity having enhancement expenditure for green solutions improvements to address raw water quality deterioration	Ml/d	0.00	6A.30
Total water treated at more than one type of works	Ml/d	0.00	6A.31
Number of treatment works requiring remedial action because of raw water deterioration	nr	0	6A.32
Zonal population receiving water treated with orthophosphate	000's	9,573.220	6A.33
Average pumping head – water treatment	m.hd	9.93	6A.34
Energy consumption ~ water treatment	MWh	255,859.620	6A.35
Total number of water treatment imports	nr	0	6A.36
Water imported from 3rd parties' water treatment works	Ml/d	0.00	6A.37
Total number of water treatment exports	nr	2	6A.38
Water exported to 3rd parties' water treatment works	Ml/d	-4.08	6A.39

Additional commentary on raw water transport, raw water storage and water treatment data

Line 5: Total length of raw water transport mains and other conveyors

There have been no changes to the methodology this year. This represents the total of all raw water mains in our GIS since we do not differentiate between abstraction and transport mains.

Line 6: Average pumping head ~ raw water transport

There have been no significant changes to the methodology this year.

%	Source
10%	measured data (flow and lift (suction and/or delivery head)
90%	partially measured data where either the flow or head is measured but the head is estimated from a combination of static heads or the previous year's values.

Lines 13 to 27: WTW analysis

The total number of WTWs has decreased from AR22, from 97 to 93.

The 11 sites not used in the year but not decommissioned are categorised as follows:

Type	2022/23	2021/22
GW2	3	9
GW3	1	0
GW4	4	2
SW5	1	1
GW5	1	1
SW6	1	0
Total	11	13

Line 32: Number of treatment works requiring remedial action because of raw water deterioration

There were no works with substantive remedial costs during this year.

Line 34: Average pumping head – water treatment

There have been no significant changes to the methodology this year.

%	Source
25%	measured data (flow and lift (suction and/or delivery head)
75%	partially measured data where only one of the flow and head are measured and the unmeasured item is estimated from the previous year's values.

In terms of sites contributing to APH, 100% have measured volumes and/or lift.

Table 6B: Treated water distribution - assets and operations

This table reports the assets and operational data for the treated water distribution business area.

Line description	Units	Input	RAG 4 Ref
Total installed power capacity of potable water pumping stations	kW	124,400	6B.1
Total volumetric capacity of service reservoirs	Ml	3,255.1	6B.2
Total volumetric capacity of water towers	Ml	17.6	6B.3
Water delivered (non-potable)	Ml/d	0.00	6B.4
Water delivered (potable)	Ml/d	2,110.22	6B.5
Water delivered (billed measured residential properties)	Ml/d	724.27	6B.6
Water delivered (billed measured businesses)	Ml/d	415.67	6B.7
Proportion of distribution input derived from impounding reservoirs	0 to 1	0.028	6B.8
Proportion of distribution input derived from pumped storage reservoirs	0 to 1	0.682	6B.9
Proportion of distribution input derived from river abstractions	0 to 1	0.020	6B.10
Proportion of distribution input derived from groundwater works, excluding managed aquifer recharge (MAR) water supply schemes	0 to 1	0.254	6B.11
Proportion of distribution input derived from artificial recharge (AR) water supply schemes	0 to 1	0.015	6B.12
Proportion of distribution input derived from aquifer storage and recovery (ASR) water supply schemes	0 to 1	0.000	6B.13
Proportion of distribution input derived from saline abstractions	0 to 1	0.000	6B.14
Proportion of distribution input derived from water reuse schemes	0 to 1	0.000	6B.15
Total number of potable water pumping stations that pump into and within the treated water distribution system	nr	308	6B.16
Number of potable water pumping stations delivering treated groundwater into the treated water distribution system	nr	65	6B.17
Number of potable water pumping stations delivering surface water into the treated water distribution system	nr	12	6B.18
Number of potable water pumping stations that re-pump water already within the treated water distribution system	nr	231	6B.19
Number of potable water pumping stations that pump water imported from a 3rd party supply into the treated water distribution system	nr	0	6B.20
Total number of service reservoirs	nr	241	6B.21
Number of water towers	nr	29	6B.22
Energy consumption – treated water distribution (MWh)	MWh	143,159.694	6B.23
Average pumping head – treated water distribution	m.hd	64.78	6B.24
Total number of treated water distribution imports	nr	14	6B.25
Water imported from 3rd parties to treated water distribution systems	Ml/d	0.48	6B.26
Total number of treated water distribution exports	nr	6.00	6B.27
Water exported to 3rd parties from treated water distribution systems	Ml/d	-1.34	6B.28
Peak 7 day rolling average distribution input	Ml/d	2,899.71	6B.29
Peak 7 day rolling average distribution input / annual average distribution input	%	112.93%	6B.30
Measured household consumption (excluding supply pipe leakage)	Ml/d	672.50	6B.31

Line description	Units	Input	RAG 4 Ref
Unmeasured household consumption (excluding supply pipe leakage)	Ml/d	772.07	6B.32
Measured non-household consumption (excluding supply pipe leakage)	Ml/d	410.43	6B.33
Unmeasured non-household consumption (excluding supply pipe leakage)	Ml/d	13.34	6B.34
Total annual leakage	Ml/d	619.65	6B.35
Distribution system operational use	Ml/d	18.02	6B.36
Water taken unbilled	Ml/d	77.66	6B.37
Distribution input	Ml/d	2573.74	6B.38
Distribution input (pre-MLE)	Ml/d	2567.73	6B.39
Leakage upstream of DMA	Ml/d	35.87	6B.58
Distribution mains losses	Ml/d	445.51	6B.59
Customer supply pipe losses – measured households excluding void properties	Ml/d	51.77	6B.60
Customer supply pipe losses – unmeasured households excluding void properties	Ml/d	105.39	6B.61
Customer supply pipe losses – measured non-households excluding void properties	Ml/d	5.24	6B.62
Customer supply pipe losses – unmeasured non-households excluding void properties	Ml/d	1.82	6B.63
Customer supply pipe losses – void measured households	Ml/d	4.27	6B.64
Customer supply pipe losses – void unmeasured households	Ml/d	3.53	6B.65
Customer supply pipe losses – void measured non-households	Ml/d	1.65	6B.66
Customer supply pipe losses – void unmeasured non-households	Ml/d	0.47	6B.67

Additional commentary on treated water distribution

Lines 16 and 19: Number of potable water pumping stations

There has been no net change from the number of sites reported last year; Bickley WBS has been mothballed, offset by one new PS at Bitham Road.

Line 24: Average pumping head – treated water distribution

This year we have increased the number of sites for which both suction and delivery head data is used in the calculation. For these sites, the weighted average reduction compared to using delivery head only is 23.1% of flow head. We have applied this reduction to all sites in the distribution APH calculation this year.

%	Source
69%	measured data (flow and lift (suction and/or delivery head)
29%	partially measured data where only one of the flow and head are measured (usually flow) and the unmeasured item is estimated from the previous year's values or static head data
2%	estimated from last year's data and static head data

In terms of sites contributing to APH, 98% have measured volumes and/or lift.

Line 29: Peak seven day rolling average distribution input

The peak seven day rolling average distribution input for AR23 was 2899.71 Ml/d and occurred on the week ending the 22 December 2022. The main reason for the increase in distribution input ("DI") during this period was the freeze thaw event, which led to rapidly dropping temperatures, consequently increasing leakage and as a result DI.

Variances from our business plan and water resource management plan proposals are detailed as part of table 6D.

Line 35: Total annual leakage

The narrative for this line can be seen under BW04 Leakage.

Table 6C: Water network+ - Mains, communication pipes and other data

This table reports the mains analysis, mains age profile, number of communication pipes and additional data for the water network plus price control.

Line description	Units	Input	RAG 4 Ref
Total length of potable mains as at 31 March	km	31,926.7	6C.1
Total length of potable mains relined	km	0.1	6C.2
Total length of potable mains renewed	km	59.7	6C.3
Total length of new potable mains	km	62.2	6C.4
Total length of potable water mains (≤320mm)	km	28,873.3	6C.5
Total length of potable water mains (>320mm and ≤ 450mm)	km	939.5	6C.6
Total length of potable water mains (>450mm and ≤610mm)	km	1,076.9	6C.7
Total length of potable water mains (> 610mm)	km	1,037.0	6C.8
Total length of potable mains laid or structurally refurbished pre-1880	km	4,651.3	6C.9
Total length of potable mains laid or structurally refurbished between 1881 and 1900	km	3,100.6	6C.10
Total length of potable mains laid or structurally refurbished between 1901 and 1920	km	3,833.2	6C.11
Total length of potable mains laid or structurally refurbished between 1921 and 1940	km	5,196.8	6C.12
Total length of potable mains laid or structurally refurbished between 1941 and 1960	km	2,783.6	6C.13
Total length of potable mains laid or structurally refurbished between 1961 and 1980	km	4,369.8	6C.14
Total length of potable mains laid or structurally refurbished between 1981 and 2000	km	2,817.6	6C.15
Total length of potable mains laid or structurally refurbished between 2001 and 2020	km	4,856.0	6C.16
Total length of potable mains laid or structurally refurbished post during and after 2021	km	317.9	6C.17
Number of lead communication pipes	nr	1,134,003	6C.18
Number of galvanised iron communication pipes	nr	265,037	6C.19
Number of other communication pipes	nr	1,306,782	6C.20
Number of lead communication pipes replaced for water quality	nr	13,388	6C.21
Company area	km^2	8,008	6C.22
Compliance Risk Index	nr	10.96	6C.23
Event Risk Index	nr	1,128	6C.24
Properties below reference level at end of year	nr	7.00	6C.25

Table 6D: Demand management - Metering and leakage activities

This table reports the metering and leakage activities broken down by totex and explanatory variables.

Line description	Units	Basic meter	AMR meter	AMI meter	RAG 4 Ref
Metering activities – Totex expenditure					
New optant meter installation for existing customers	£m	0.000	3.150	7.080	6D.1
New selective meter installation for existing customers	£m	0.000	0.067	45.288	6D.2
New business meter installation for existing customers	£m	0.000	0.006	0.033	6D.3
Residential meters renewed	£m	0.000	0.809	4.759	6D.4
Business meters renewed	£m	0.104	0.469	4.542	6D.5
Metering activities – Explanatory variables					
New optant meters installed for existing customers	000s	0.000	5.078	11.506	6D.6
New selective meters installed for existing customers	000s	0.000	0.132	88.577	6D.7
New business meters installed for existing customers	000s	0.000	0.012	0.070	6D.8
Residential meters renewed	000s	0.003	5.885	34.316	6D.9
Business meters renewed	000s	0.220	0.992	9.610	6D.10
Replacement of basic meters with smart meters for household customers	000s		5.111	26.850	6D.11
Replacement of AMR meter with AMI meters for household customers	000s			7.377	6D.12
Replacement of basic meters with smart meters for business customers	000s		0.867	9.187	6D.13
Replacement of AMR meter with AMI meters for business customers	000s			0.297	6D.14
New residential meters installed for existing customers – supply-demand balance benefit	Ml/d	0.00	0.01	8.46	6D.15
New business meters installed for existing customers – supply-demand balance benefit	Ml/d	0.00	0.00	0.00	6D.16
Replacement of basic meter with smart meters for household customers – supply-demand balance benefit	Ml/d		0.000	0.00	6D.17
Replacement of AMR meter with AMI meter for household customers – supply-demand balance benefit	Ml/d			0.00	6D.18
Replacement of basic meter with smart meters for business customers – supply-demand balance benefit	Ml/d		0.000	0.00	6D.19
Replacement of AMR meter with AMI meter for business customers – supply-demand balance benefit	Ml/d			0.00	6D.20
Residential properties - meter penetration	%	32.5	5.5	16.4	6D.21

Leakage activities	Units	Maintaining leakage	Reducing leakage	Total	RAG 4 Ref
Total leakage activity	£m	275.733	85.195	360.928	6D.22
Leakage improvements delivering benefits in 2020-25	Ml/d			-25.82	6D.23

Per capita consumption (excluding supply pipe leakage)	Units		RAG4 Ref
Per capita consumption (measured)	l/h/d	116.05	6D.24
Per capita consumption (unmeasured)	l/h/d	172.29	6D.25

Additional commentary on metering activities

Lines 6-10: Metering installation programme

Our strategy is to only install smart meters in our optant, selective and replacement programmes. These meters can be read in Automatic Meter Reading ("AMR") or Advanced Meter Infrastructure ("AMI") modes when Local Communications Equipment ("LCE") is installed, in areas of fixed network coverage. All meters installed are classified as 'smart' based on the definition outlined by Ofwat. However, there will be instances when a customer may request a 'basic' meter, either through the non-household retail market (meter to be logged) or for our household customers on religious grounds.

Within our London WRZ, which is covered by our wide area radio network, we deploy meters that can work in AMR mode and be read by driving or walking by the meters. When combined with a LCE, these meters can alternatively operate in AMI mode; this is our preferred deployment mode as it allows meter reads to be collected remotely through our wide area network.

The smart meters allow us to receive a daily profile of either 15 minute or hourly read data. This rich source of data allows us to better understand water usage in our supply area and identify leakage and wastage, enabling us to work with customers to help reduce demand and leakage.

In 2022/23, we installed 156,401 meters, which is a decrease of 11% from the previous year. Our performance at the beginning of the year was impacted by supply issues due to the global microchip shortage. However, by working closely with our partners we have been able to partially recover our position.

Compared to our business plan, we have exceeded the 2022/23 forecasts by 5.5% and we have exceeded our cumulative position for the AMP by 4.8%.

Our WRMP forecast aligns to the business plan shown below:

	Business Plan Forecast				Actual			
	2020/21	2021/22	2022/23	Total	2020/21	2021/22	2022/23	Total
Residential meters renewed	33,895	33,895	28,256	96,046	25,850	49,285	40,204	115,339
Business meters renewed	11,000	11,000	11,000	33,000	11,360	10,639	10,822	32,821
Optant installs	17,289	17,289	16,156	50,734	12,353	21,006	16,584	49,943
Selective meters installed	64,743	88,971	92,773	246,487	44,137	94,454	88,709	221,300
New business meters installed	-	0	0	0	24	90	82	196
Total	116,804	141,032	148,185	406,021	93,724	175,474	156,401	425,599

For the residential replacement programme, we are ahead of the WRMP target for the cumulative AMP position as we have prioritised recovery of this workstream post-COVID and in light of the microchip shortages. We are slightly behind for the other programmes but have developed better supply strategies over the past three years and aim to recover this shortfall by the end of 2023/24.

The higher leakage levels this year are despite having significantly increased output of detection and repair of leaks. Against levels in 2021/22, visible leak repairs completed in 2022/23 were up 36%, with visible mains leak repairs increasing by 90%, almost double. Similarly, the value of hidden leakage detected and repaired was up 27%, with 43% more mains leaks detected and repaired, compared with that completed in 2021/22.

Further leakage commentary can be found in section BW04 Leakage.

Table 6F: WRMP annual reporting on delivery – non-leakage activities

We've chosen to publish the regulatory table 6F as a separate document to this Annual Performance Report due to the size of the table. This has been prepared in line with regulatory guidelines and follows the principles set out in this Annual Performance Report.

You can view this table on our website.

Additional commentary on supply-side improvements

Supply-demand in the London WRZ remains in surplus. When the raw water purchase agreement with RWE Npower at Didcot was delivered in 2020/21, the deployable output ("DO") benefit to the London WRZ increased by 24 Ml/d. This DO benefit meant London WRZ exceeded the planned WRMP19 benefit of 18 Ml/d by 6 Ml/d.

With the supply-demand in the London WRZ remaining in surplus, the delivery of the New River Head (removal of constraints) scheme – originally due for completion in 2020/21 – continues to be deferred. Similarly, the delivery of the Horton Kirby aquifer storage and recovery ("ASR") and Southfleet/Greenhithe groundwater schemes are deferred beyond the end of AMP7.

Definition of the development work scope is underway for East London (Addington) ASR although its current delivery date is in early AMP9 (2031/32).

The Deephams Indirect Potable Reuse scheme has been included in the benefits to be reported but is now not supported by the EA and will not be delivered owing to their rejection of the scheme.

Other Strategic Resource Options ("SRO") are under consideration as a replacement of this scheme as part of the WRSE WRMP24 process. We have not included any SROs in Table 6F as they are at conceptual design stage.

No supply-side improvements schemes were planned in Guildford WRZ AMP to date, consistent with our WRMP19 programme.

No schemes are planned for AMP7 in any other zones.

Additional commentary on internal interconnector improvements

We have one project in AMP7 which is delivering a new 9km trunk main between Pewley Reservoir and Netley Mill WTW, improving Netley Mill's resilience.

Additional commentary on demand-side improvements

The cumulative Ml/d demand reduction achieved AMP to date is slightly ahead of forecast, with some demand reduction variation seen across all individual activities. The Water Efficiency programme will continue to evolve, using smart meter data and regular monitoring of each activity, with a focus on the total AMP7 demand reduction objective.

Line 9: Smarter Home Visits ("SHVs")

Our SHV activity was reduced during 2022/23 due to re-profiling of demand reduction programmes in line with smart meter rollout activities and the increasing focus on targeted digital engagement. Despite this, the Ml/d demand reductions achieved through SHVs were only slightly below forecast.

Our total AMP7 cumulative Ml/d demand reductions are below the original AMP7 forecast, due to long-standing impacts of COVID restrictions for on-ground delivery capability, plus a shift to increase targeted digital engagement with customers and drive self-fix activity.

We use smart meter data to assist with targeting high usage households and maximising the demand reductions achieved per SHV, plus continuous flow data to initiate targeted engagement for both wastage self-fixes and CSL action. This insight has been shared with the Government, regulators and other water companies to help inform PR24 programme development.

Additional commentary on table 6F

Line 10: Smarter Business Visits ("SBVs") including wastage fixes

Our SBV activity continues to be very effective for demand reduction.

The Ml/d demand reduction benefits delivered in 22/23 exceeded the annual forecast through partnership working with the Department for Education enabling increased school visits, which provide enhanced water saving opportunities and help public sector organisations secure financial savings benefits.

During and since the 2023 drought, we have used smart meter data to help target continuous flows on business properties and increase joint working with business retailers. Our insight on business water usage and loss was shared with Defra to aid the development of new national water targets for business demand, plus shared with Ofwat and the Retailer-Wholesaler Group to aid the development of PR24 performance commitment approaches. Our water savings evidence from SBVs also assisted in the Market Operator Services Limited's ("MOSL's") development of their Interim Metering Strategy.

Our SBVs were also being used in specific WRZs in response to the 2023 heatwave and drought.

Line 11: Wastage fixes – households

Our wastage fixes are continuing to deliver consistent and useful water savings per visit, but the cumulative demand reduction process is behind the original WRMP19 projection due to the long-standing impacts of COVID restrictions, which resulted in months of no delivery. The insight from our wastage fix initiative was supplied to Defra and Ofwat to inform National Water Target and PR24 demand reduction approaches.

Our wastage evidence continues to be shared with regulators, industry and trade bodies, the manufacturing industry and product certification bodies to help inform activities aiming to address the UK's 'leaky loo' issue.

Line 12: Greenredeem / household incentive scheme

Our ability to expand our Greenredeem water efficiency incentive, in line with WRMP19 projections, was impacted by reduced SHV activity along with a restricted ability to engage digitally with customers to promote water efficiency incentives due to the updated Privacy and Electronic Communications Regulation ("PCR") ruling on data protection laws, requiring greater levels of customer consent. The demand reduction volumes per customer registered with Greenredeem continue to be very favourable.

We have expanded the partnership with Greenredeem to include sewer abuse/ blockage education and customer engagement. We will continue our use of incentives to enable greater demand reduction benefits to smart meters customers.

Line 13: Non-potable water

We have not delivered any non-potable water reduction in AMP7. Our efforts have focused on working with Defra and the Future Homes Hub to inform the development and consultation of Building Regulations changes.

We have also introduced the water sector's first Environmental Incentive for Developers with financial rewards for the take-up of water reuse technology, such as rainwater harvesting and greywater recycling. This aims to accelerate the adoption of non-potable technologies within new housing developments and work towards a 'water neutral' outcome. We are also working with a large golf course to scope and implement an innovative use of final wastewater effluent within irrigation practices.

Line 14: Housing Associations

We migrated all separate housing association home visits into our larger SHV programme in 21/22. From 22/23 onwards, all water efficiency visits conducted in housing association properties will fall into the SHV delivery and reporting space.

Line 15: Innovation savings

We have continued with our Water Efficiency Incentive for Business Retailers. Insight from this offering is shared with Ofwat, MOSL and retailers to inform future retail market regulation and engagement bilateral arrangements.

We continue to work proactively with external suppliers of new technology and customer engagement opportunities. These can lead to small pilots and trials to inform future water efficiency programmes. In parallel to sharing these results with other water companies through the Water Efficiency Network, we will use these trials to expand our innovation activity into later AMPs.

Line 16: Financial tariffs

As per WRMP19, financial tariffs have been included after 2024/25. They are planned for introduction once our metering programme is complete. Therefore, there are no financial tariffs in AMP7.

Line 17: Green Economic Recovery

See Section 10A for further information.

Section 7
Additional regulatory information – wastewater network plus

Table 7A: Wastewater network+ - Functional expenditure

This table shows functional expenditure for our sewage treatment works split by site size.

Line description	£'000	RAG 4 Ref
Direct costs of STWs in size band 1	1,651.869	7A.1
Direct costs of STWs in size band 2	1,406.928	7A.2
Direct costs of STWs in size band 3	4,242.100	7A.3
Direct costs of STWs in size band 4	9,270.914	7A.4
Direct costs of STWs in size band 5	9,038.282	7A.5
General & support costs of STWs in size bands 1 to 5	4,123.537	7A.6
Functional expenditure of STWs in size bands 1 to 5 (excluding 3rd party services)	29,733.630	7A.7
Service charges for STWs in size band 6	3,680.592	7A.8
Estimated terminal pumping costs size band 6 works	1,450.484	7A.9
Other direct costs of STWs in size band 6	154,885.574	7A.10
Direct costs of STWs in size band 6	160,016.650	7A.11
General & support costs of STWs in size band 6	26,884.719	7A.12
Functional expenditure of STWs in size band 6 (excluding 3rd party services)	186,901.369	7A.13
Total operating functional expenditure (excluding 3rd party services)	216,634.999	7A.14

Table 7B: Wastewater network+ - Large sewage treatment works

We've chosen to publish the regulatory table 7B as a separate document to this Annual Performance Report due to the size of the table. This has been prepared in line with regulatory guidelines and follows the principles set out in this Annual Performance Report.

You can view this table on our website.

Table 7C: Wastewater network+ - Sewer and volume data

This table reports the sewer and volume data for the wastewater network plus price control.

Line description	Units	Input	RAG 4 Ref
Connectable properties served by s101A schemes completed in the report year	nr	0	7C.1
Number of s101A schemes delivered in the report year	nr	0	7C.2
Total pumping station capacity	kW	138,499	7C.3
Number of network pumping stations	nr	5,135	7C.4
Total number of sewer blockages	nr	73,780	7C.5
Total number of gravity sewer collapses	nr	282	7C.6
Total number of sewer rising main bursts	nr	106	7C.7
Number of combined sewer overflows	nr	325	7C.8
Number of emergency overflows	nr	20	7C.9
Number of settled storm overflows	nr	250	7C.10
Sewer age profile (constructed post 2001)	km	10,530	7C.11
Volume of trade effluent	Ml/yr	20,728.84	7C.12
Volume of wastewater receiving treatment at sewage treatment works	Ml/yr	1,559,511.39	7C.13
Length of gravity sewers rehabilitated	km	40	7C.14
Length of rising mains replaced or structurally refurbished	km	1	7C.15
Length of foul (only) public sewers	km	38,250	7C.16
Length of surface water (only) public sewers	km	22,812	7C.17
Length of combined public sewers	km	5,816	7C.18
Length of rising mains	km	2,042	7C.19
Length of other wastewater network pipework	km	366	7C.20
Total length of "legacy" public sewers as at 31 March	km	69,286	7C.21
Length of formerly private sewers and lateral drains (s105A sewers)	km	40,069	7C.22

Additional commentary on sewer and volume data

Line 14: Length of gravity sewers rehabilitated

The length of gravity sewer rehabilitation completed in 2022-23 (40,178m) has increased by 9% from 2021-22 (36,756m). The number of reactive dig downs and relining jobs completed has decreased by 3% (2,240 to 1,943), so the increase is predominantly due to more proactive rehabilitation completed in 2022-23.

Line 15: Length of rising mains replaced or structurally refurbished

The length of rising main repair completed in 2022-23 (923m) has decreased by 62% from 2021-22 (2,449m). This is primarily because only one planned rising main project was delivered in the year (650m), and the remaining activities were shorter length, reactive repairs.

Our interpretation of “structurally refurbished” is that it is intended to capture any pipeline rehabilitation technique which results in an improvement in the structural integrity of the pipe such that its expected service life has been materially extended.

Table 7D: Wastewater network+ - Sewage treatment works data

This table reports the sewage treatment works load and numbers categorised by size bands and the population equivalent data.

Line description	Units	Treatment categories							
		Primary	Secondary		Tertiary				Total
			Activated Sludge	Biological	A1	A2	B1	B2	
Load received by STWs in size band 1	kg BOD_5/day	5	55	245	33	0	163	14	515
Load received by STWs in size band 2	kg BOD_5/day	0	86	449	20	0	470	158	1,183
Load received by STWs in size band 3	kg BOD_5/day	0	296	1,491	486	0	2,424	585	5,283
Load received by STWs in size band 4	kg BOD_5/day	0	3,115	3,290	1,023	1,527	7,604	6,346	22,905
Load received by STWs in size band 5	kg BOD_5/day	0	1,700	0	0	9,575	2,244	13,154	26,673
Load received by STWs above size band 5	kg BOD_5/day	0	561,480	0	0	342,622	3,916	39,626	947,644
Total load received	kg BOD_5/day	5	566,733	5,475	1,562	353,724	16,820	59,883	1,004,202
Load received from trade effluent customers at treatment works	kg BOD_5/day								26,941
STWs in size band 1	nr	2	10	40	5	0	18	1	76
STWs in size band 2	nr	0	4	18	1	0	18	6	47
STWs in size band 3	nr	0	5	24	5	0	36	8	78
STWs in size band 4	nr	0	10	11	3	3	27	19	73
STWs in size band 5	nr	0	2	0	0	8	3	13	26
STWs above size band 5	nr	0	5	0	0	35	2	12	54
Total number of works	nr	2	36	93	14	46	104	59	354

Line description	Units	Treatment works consents										
		Phosphorus					BOD_5					
		<=0.5mg/l	>0.5 to <=1mg/l	>1mg/l	No permit	Total	<=7mg/l	>7 to <=10mg/l	>10 to <=20mg/l	>20mg/l	No permit	Total
Load received by STWs in size band 1	kg BOD_5/day	0	14	0	500	514	0	5	71	396	42	514
Load received by STWs in size band 2	kg BOD_5/day	100	46	19	1,018	1,183	0	15	417	728	23	1,183
Load received by STWs in size band 3	kg BOD_5/day	336	687	35	4,225	5,283	0	996	1,544	2,743	0	5,283
Load received by STWs in size band 4	kg BOD_5/day	985	1,590	1,608	19,495	23,678	1,538	4,613	14,477	3,050	0	23,678
Load received by STWs in size band 5	kg BOD_5/day	0	1,160	23,348	2,165	26,673	3,315	9,625	12,573	1,160	0	26,673
Load received by STWs above size band 5	kg BOD_5/day	18,311	278,490	81,397	568,672	946,871	138,113	131,688	614,503	62,566	0	946,871
Total load received	kg BOD_5/day	19,732	281,987	106,408	596,075	1,004,201	142,965	146,942	643,585	70,644	65	1,004,201
Load received from trade effluent customers at treatment works	kg BOD_5/day											
STWs in size band 1	Nr	0	1	0	74	75	0	1	11	54	9	75
STWs in size band 2	Nr	4	2	1	40	47	0	1	12	33	1	47
STWs in size band 3	Nr	4	10	1	63	78	0	12	23	43	0	78
STWs in size band 4	Nr	3	5	3	63	74	4	12	44	14	0	74
STWs in size band 5	Nr	0	1	22	3	26	3	10	12	1	0	26
STWs above size band 5	Nr	3	18	27	7	55	8	25	18	4	0	55
Total number of works	Nr	14	37	54	250	355	15	61	120	149	10	355

Line description	Units	Treatment works consents						
		Ammonia						
		<=1mg/l	>1 to <=3mg/l	>3 to <=10mg/l	>10mg/l	No permit	Total	RAG 4 Ref
Load received by STWs in size band 1	kg BOD_5/day	0	0	68	92	354	514	7D.1
Load received by STWs in size band 2	kg BOD_5/day	0	15	512	155	502	1,183	7D.2
Load received by STWs in size band 3	kg BOD_5/day	0	525	2,332	930	1,495	5,283	7D.3
Load received by STWs in size band 4	kg BOD_5/day	0	10,718	10,190	1,922	847	23,678	7D.4
Load received by STWs in size band 5	kg BOD_5/day	0	13,327	13,346	0	0	26,673	7D.5
Load received by STWs above size band 5	kg BOD_5/day	138,904	708,505	92,187	7,274	0	946,871	7D.6
Total load received	kg BOD_5/day	138,904	733,091	118,636	10,372	3,199	1,004,201	7D.7
Load received from trade effluent customers at treatment works	kg BOD_5/day							7D.8
STWs in size band 1	nr	0	0	9	11	55	75	7D.9
STWs in size band 2	nr	0	1	16	7	23	47	7D.10
STWs in size band 3	nr	0	7	32	15	24	78	7D.11
STWs in size band 4	nr	0	31	34	4	5	74	7D.12
STWs in size band 5	nr	0	14	12	0	0	26	7D.13
STWs above size band 5	nr	7	32	15	1	0	55	7D.14
Total number of works	nr	7	85	118	38	107	355	7D.15

Population equivalent	Units	Primary	RAG 4 Ref
Current population equivalent served by STWs	000s	15,315.688	7D.16
Current population equivalent served by STWs with tightened/new P consents	000s	0.000	7D.17
Current population equivalent served by STWs with tightened/new N consents	000s	0.000	7D.18
Current population equivalent served by STWs with tightened/new sanitary parameter consents	000s	1.550	7D.19
Current population equivalent served by STWs with tightened/new microbiological treatment consents (for example UV, ozone etc)	000s	0.000	7D.20
Population equivalent treatment capacity enhancement	000s	0.000	7D.21
Current population equivalent served by STWs with tightened/new consents for chemicals or other hazardous substances.	000s	661.186	7D.22

Additional commentary on sewage treatment works data

Line 21: Population equivalent treatment capacity enhancement

This line was not expected to be zero, but multiple schemes were delayed in delivery and will now be realised in AR24.

Table 7E: Wastewater network+ - Energy consumption and other data

This table reports the energy consumption and additional data for the wastewater network plus price control.

Line description	Units	Input	RAG 4 Ref
Total sewerage catchment area	km^2	2,668	7E.1
Designated bathing waters (inland and coastal)	Nr	7	7E.2
Number of intermittent discharge event duration monitoring	Nr	60	7E.3
Number of monitors for flow monitoring at STWs	Nr	15	7E.4
Number of odour related complaints	Nr	541	7E.5
Energy consumption - sewage collection	MWh	106,411.989	7E.6
Energy consumption - sewage treatment	MWh	652,539.194	7E.7
Energy consumption - wastewater network +	MWh	758,951.183	7E.8
Cumulative shortfall in FFT addressed by WINEP / NEP schemes to increase STW capacity	l/s	121.000	7E.9
Number of sites with an increase in sewage treatment works capacity delivered to address a shortfall in FFT	Nr	1	7E.10
Additional storm tank capacity provided at sewage treatment works (grey infrastructure)	m3	816.400	7E.11
Additional effective storm storage capacity at sewage treatment works (green infrastructure)	m3	0.000	7E.12
Additional volume of network storage at CSOs etc to reduce spill frequency (grey infrastructure)	m3	0.000	7E.13
Additional effective storage in the network delivered through green infrastructure	m3	0.000	7E.14
Total number of sewage treatment works sites where additional storage has been delivered (grey infrastructure)	Nr	4	7E.15
Number of sewage treatment works sites where additional storage has been delivered with pumping (grey infrastructure)	Nr	4	7E.16
Number of sewage treatment works benefitting from green infrastructure replacing the need for storm tank storage	Nr	0	7E.17
Number of sites delivering additional network storage (grey infrastructure)	Nr	0	7E.18
Number of sites delivering additional network storage including pumping (grey infrastructure)	Nr	0	7E.19
Number of sites delivering additional network storage through green infrastructure	Nr	0	7E.20
Surface water separation drainage area removed	m2	5,600	7E.21
Number of schemes delivered to meet tightened or new sanitary consents	Nr	1.000	7E.22
Number of installations requiring civils for flow monitoring at sewage treatment works	Nr	16	7E.23
Number of installations requiring civils for event duration monitoring at intermittent discharges	Nr	6.000	7E.24
Number of storm overflows where improvements have been made to reduce harm or reduce spill frequencies	Nr	10	7E.25

Table 7F: Wastewater network+ - WINEP phosphorus removal scheme costs and cost drivers

We've chosen to publish the regulatory table 7F as a separate document to this Annual Performance Report due to the size of the table. This has been prepared in line with regulatory guidelines and follows the principles set out in this Annual Performance Report.

You can view this table on our website.

The future numbers are based on the latest approved forecast. However we are currently reassessing our forecast and will publish alongside our early submission of PR24 data tables.

Additional commentary on table 7F

Capex

Our capex data is predominantly sourced from the March 2023 monthly project expenditure report issued by our Finance team. To achieve consistency to the PR19 submission, we have used the closely governed purpose codes for each project (STTSOBGC, STTSQBGC and STTSQPGC indicate phosphorous removal).

Exceptions from this process are made for four projects containing multiple sites; additional granularity is then sought from the financial modelling provided by Capital Delivery (our mechanism for delivering large complex capital work).

Future projects originate from the PR19 business plan and have the same purpose codes. New lines that have been added are allocated a purpose code(s) based on the type of work and benefits expected to be delivered.

Actual spend in the reporting year is compared with 4M.35 and historically reported spend in cost assessment submissions to ensure consistency of mapping within table lines and across accounting separations for all projects.

The data used to populate table 7F also contains a small number of high-level adjustment lines which cannot be specific to individual projects, such as for uncommitted funding which is allocated to the phosphorus removal programme but not yet a specific site. This is spread pro-rata across all sites in the model on a cost ratio basis within each reporting year.

Completion dates have been reviewed and updated from AR22 where necessary by our project and investment teams.

Opex

For AMP6 schemes, our OIS tool has been used based on the design PE for each site and budgets as at November 2019. This tool combines power data from the Energy and Carbon Team, chemicals budget data and our actual historical unit rates for power and chemicals.

For AMP7 schemes, we have used the PR19 calculation by phosphorus permit limit banding (0.1-0.5mg/l and >0.5mg/l) and PE banding (<10,000 and >10,000). This may result in a higher than expected opex, especially for our smallest sites, but provides a standardised framework.

Across all opex estimation, we have assumed that it is prudent to use the 2022-23 unit rates for future years. For all projects expected to be completed by AR25, the opex has been pro-rated based on the number of months of full scheme use following completion according to the project design details. For projects completing in AMP8 or beyond, we have provided the full year opex according to the RAG requirements.

Cost Drivers

The scheme design PE figures are as stated in the project briefs, modelled according to our standard growth insights and modelling techniques.

Historical permit levels are taken from our discharge permit database. Enhanced permit levels are as stated in our AMP6 or AMP7 WINEP tracker, according to the completion date of the scheme.

For sites where we have confirmed that the scheme is only a permit change, a design review by the Capital Delivery team has confirmed that there are no structural works included. Similarly, catchment-based solutions would have been identified through the project briefs for future schemes and design reports for those completed in AMP6, but we do not currently have any relating to phosphorus removal.

We only have one transfer pipeline scheme in scope – Rusper STW – which was completed in AMP6, so this is the only scheme showing details for the transfer pipeline and transferred flow cost drivers.

We have not identified any additional company-specific cost drivers.

Section 8
Additional regulatory information – bioresources

Table 8A: Bioresources sludge data

This table reports the Bioresources sludge data for the company.

Line description	Units	Total	RAG 4 Ref
Total sewage sludge produced, treated by incumbents	ttds/ year	353.9	8A.1
Total sewage sludge produced, treated by 3rd party sludge service provider	ttds/ year	0.0	8A.2
Total sewage sludge produced	ttds/ year	353.9	8A.3
Total sewage sludge produced from non-appointed liquid waste treatment	ttds/ year	2.5	8A.4
Percentage of sludge produced and treated at a site of STW and STC co-location	%	86.49	8A.5
Total sewage sludge disposed by incumbents	ttds/ year	221.6	8A.6
Total sewage sludge disposed by 3rd party sludge service provider	ttds/ year	0.0	8A.7
Total sewage sludge disposed	ttds/ year	221.6	8A.8
Total measure of intersiting 'work' done by pipeline	ttds*km/year	113	8A.9
Total measure of intersiting 'work' done by tanker	ttds*km/year	869	8A.10
Total measure of intersiting 'work' done by truck	ttds*km/year	804	8A.11
Total measure of intersiting 'work' done (all forms of transportation)	ttds*km/year	1,786	8A.12
Total measure of intersiting 'work' done by tanker (by volume transported)	m^3*km/yr	24,562,807	8A.13
Total measure of 'work' done in sludge disposal operations by pipeline	ttds*km/year	0	8A.14
Total measure of 'work' done in sludge disposal operations by tanker	ttds*km/year	0	8A.15
Total measure of 'work' done in sludge disposal operations by truck	ttds*km/year	14,003	8A.16
Total measure of 'work' done in sludge disposal operations (all forms of transportation)	ttds*km/year	14,003	8A.17
Total measure of 'work' done by tanker in sludge disposal operations (by volume transported)	m^3*km/yr	0	8A.18
Chemical P sludge as % of sludge produced at STWs	%	41.59	8A.19

Additional commentary on bioresources sludge data

Line 4: Total sewage sludge produced from non-appointed liquid waste treatment

All cess waste imported into our sewage treatment facilities discharges via cess loggers, which record the volume and solids content of the cess. The majority of incoming cess is too dilute to record a solids content, so these volumes did not contribute to our calculation. As such, only imports that recorded solids above the recording limit of the meters were used. Therefore, the mass of solids due to non-appointed waste was negligible compared to the overall tonnage of sludge produced through the appointed business.

Lines 10, 11, 13, 15, 16 and 18: tanker and truck movements

Internal tankering services were used for intersite movement of liquid sludge, supported by ten framework suppliers. Intersite cake in trucks was undertaken by a haulage contractor, but under the management of internal staff. All transport activity was managed by our in-house logistics team and therefore all deemed to be undertaken by the incumbent and not a third party. The only sludge transport undertaken by dedicated pipeline is a transfer between Beckton and Riverside sludge centres in east London.

Contractors were also used to undertake haulage and spreading of final product, but under our management. During the period, only dewatered sludge cake was recycled, therefore no liquid tanker operations were employed for final disposal.

Actual road distances were not available, so radial distance inflated by a multiplier of 1.4 was applied. This factor was calculated from a sample set of data where radial distances between sites were compared to actual road distances.

Table 8B: Bioresources operating expenditure analysis

This table shows the bioresources operating expenditure for the upstream services, processes and disposal routes.

Line description Units: £m	Pipeline	Tanker	Truck	Total	RAG 4 Ref
Sludge transport method					
Power	0.000	0.013	0.003	0.016	8B.1
Income treated as negative expenditure	0.000	0.000	0.000	0.000	8B.2
Discharge consents	0.000	0.000	0.000	0.000	8B.3
Bulk discharge	0.000	0.000	0.000	0.000	8B.4
Other operating expenditure					
Renewals expensed in year (Infrastructure)	0.000	0.000	0.000	0.000	8B.5
Renewals expensed in year (Non-Infrastructure)	0.000	0.000	0.000	0.000	8B.6
Other operating expenditure excluding renewals	0.054	6.032	1.252	7.338	8B.7
Total functional expenditure	0.054	6.045	1.255	7.354	8B.8
Local authority and Cumulo rates	0.000	0.000	0.000	0.000	8B.9
Total operating expenditure (excluding 3rd party)	0.054	6.045	1.255	7.354	8B.10

Line description Units: £m	Untreated Sludge	Raw Sludge liming	Conventional AD	Incineration of raw sludge	Photo-conditioning/ composting	Advanced Anaerobic Digestion	Other	Total	RAG 4 Ref
Sludge treatment type									
Power	-0.028	-0.194	-4.256	-1.331	0.000	-8.054	0.000	-13.863	8B.11
Income treated as negative expenditure	0.000	0.000	-5.526	-1.697	0.000	-10.458	0.000	-17.681	8B.12
Discharge consents	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.13
Bulk discharge	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.14
Other operating expenditure									
Renewals expensed in year (Infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.15
Renewals expensed in year (Non-Infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.16
Other operating expenditure excluding renewals	0.103	0.718	15.752	4.926	0.000	29.811	0.000	51.310	8B.17
Total functional expenditure	0.075	0.524	5.970	1.898	0.000	11.299	0.000	19.766	8B.18
Local authority and Cumulo rates	0.001	0.006	0.138	0.043	0.000	0.261	0.000	0.449	8B.19
Total operating expenditure (excluding 3rd party)	0.076	0.530	6.108	1.941	0.000	11.560	0.000	20.215	8B.20

Line description Units: £m	Landfill, raw	Landfill, partly treated	Land restoration/ reclamation	Sludge recycled to farmland	Incineration of digested Sludge	Other	Total	RAG 4 Ref
Power	0.000	0.000	0.005	1.253	0.000	0.000	1.258	8B.21
Income treated as negative expenditure	0.000	0.000	-0.003	-0.808	0.000	0.000	-0.811	8B.22
Discharge consents	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.23
Bulk discharge	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.24
Renewals expensed in year (Infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.25
Renewals expensed in year (Non-Infrastructure)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8B.26
Other operating expenditure excluding renewals	0.000	0.000	0.156	38.863	0.000	0.000	39.019	8B.27
Total functional expenditure	0.000	0.000	0.158	39.308	0.000	0.000	39.466	8B.28
Local authority and Cumulo rates	0.000	0.000	0.000	0.049	0.000	0.000	0.049	8B.29
Total operating expenditure (excluding 3rd party)	0.000	0.000	0.158	39.357	0.000	0.000	39.515	8B.30

Table 8C: Bioresources energy and liquors analysis

This table shows the energy generated and income received for our bioresources price control.

Line description	Electricity	Heat	Biomethane	Total
	MWh	MWh	MWh	MWh
Energy consumption – bioresources				423,019
Energy generated by and used in bioresources control	144,823	211,255	0	356,079
Energy generated by bioresources and used in network plus control	-138,467	-1,637	0	-140,104
Energy generated by bioresources and exported to the grid or third party	-18,306	0	-32,814	-51,120
Energy generated by bioresources that is unused	0	157,940	1,351	159,290
Energy bought from grid or third party and used in bioresources control	95,470	22,590	0	118,060

Line description	Electricity	Heat	Biomethane	Total	RAG 4 Ref
	£m	£m	£m	£m	
Energy consumption - bioresources				73.235	8C.1
Energy generated by and used in bioresources control	31.904	20.047	0.000	51.951	8C.2
Energy generated by bioresources and used in network plus control	-29.842	-0.413	0.000	-30.255	8C.3
Energy generated by bioresources and exported to the grid or third party	-3.348	0.000	1.920	-1.428	8C.4
Energy generated by bioresources that is unused					8C.5
Energy bought from grid or third party and used in bioresources control	20.458	2.254	0.000	22.712	8C.6

Income from renewable energy subsidies	Unit	Value	RAG 4 Ref
Income claimed from Renewable Energy Certificates (ROCs)	£m	-9.014	8C.7
Income claimed from Renewable Heat Incentives (RHIs)	£m	-1.239	8C.8
Income claimed from ROC recycle income	£m	-1.426	8C.9
Income claimed from [other renewable energy subsidy (2)]	£m	0.000	8C.10
Income claimed from [other renewable energy subsidy (3)]	£m	0.000	8C.11
Total income claimed from renewable energy subsidies	£m	-11.679	8C.12
% of total number of renewable energy subsidies due to expire in the next 2 financial years	%	0%	8C.13
This year's value of renewable energy subsidies due to expire in the next 2 financial years	£m	0.000	8C.14

Bioresources liquors treated by network plus (shadow reported)	Unit	Value	RAG 4 Ref
BOD load of liquor or partially treated liquor returned from bioresources to network plus	kg/d	24,007	8C.15
Ammonia load of liquor or partially treated liquor returned from bioresources to network plus	kg Amm-N/d	17,555	8C.16
Recharge to Bioresources by network plus for costs of handling and treating bioresources liquors	£m	14.070	8C.17

Line description	Electricity	Heat	Biomethane	Total
	MWh	MWh	MWh	MWh
Energy consumption – bioresources				423,019
Energy generated by and used in bioresources control	144,823	211,255	0	356,079
Energy generated by bioresources and used in network plus control	-138,467	-1,637	0	-140,104
Energy generated by bioresources and exported to the grid or third party	-18,306	0	-32,814	-51,120
Energy generated by bioresources that is unused	0	157,940	1,351	159,290
Energy bought from grid or third party and used in bioresources control	95,470	22,590	0	118,060

Line description	Electricity	Heat	Biomethane	Total	RAG 4 Ref
	£m	£m	£m	£m	
Energy consumption - bioresources				73.235	8C.18
Energy generated by and used in bioresources control	31.904	20.047	0.000	51.951	8C.19
Energy generated by bioresources and used in network plus control	-29.842	-0.413	0.000	-30.255	8C.20
Energy generated by bioresources and exported to the grid or third party	-3.348	0.000	1.920	-1.428	8C.21
Energy generated by bioresources that is unused					8C.22
Energy bought from grid or third party and used in bioresources control	20.458	2.254	0.000	22.712	8C.23

	%	RAG 4 Ref
Percentage of bioresources energy consumption that is metered	56	8C.24

Additional commentary on bioresources energy and liquors analysis

Lines 15 and 16: Biochemical oxygen demand ("BOD") load and ammonia load of liquor or partially treated liquor returned from bioresources to network plus

During the period, all dewatering centres and sludge treatment facilities produced liquor which was returned to the adjacent STW for treatment. Whilst we have started a programme to routinely measure these loads, we were unable to provide representative samples across all sites, due to difficulties with identifying suitable sampling locations and, in some instances, safe access to the sampling facility.

We have therefore only periodically tested these liquors for BOD and ammonia concentration and have used our generic asset standard loading rates for typical liquor strength according to the dewatering technologies and processes.

Additionally, due to the arrangement on each site, measurement of liquor flows is difficult to assess. Therefore, the annual average daily flows into the dewatering plant and the associated dry solids concentration of the ingoing and outgoing sludge were used to calculate the volume of liquor. These figures were also adjusted to take out the polymer and wash water used during the dewatering process.

It should be noted that changes year on year for these lines are likely attributable to our focus on continually optimising the sludge management in both transfers between strategic sites and managing locally indigenous sludge. We aim to minimise and balance factors such as the impact of costs to transport, the impact of tanker movements on local communities and other operational costs to the business.

Line 17: Recharge to bioresources by network plus for costs of handling and treating bioresources liquors

The cost to treat the liquor was calculated using the liquor concentrations from lines 15 and 16. Given that the cost is predominantly associated with the ammonia loads, our cost base was the proportion of the secondary treatment process at each STW in operation. We used the estimated modern equivalent asset value ("MEAV") of the secondary treatment process plus the operating costs incurred in treating the load and the associated thickening costs of handling the biological sludge generated.

Table 8D: Bioresources sludge treatment and disposal data

This table reports the percentage of sludge treatment processes and percentage of (un-incinerated) sludge disposal and recycling routes.

Line description Unit: %	By incumbent	By 3rd party sludge service providers	RAG 4 Ref
% Sludge – untreated	0.4%	0.0%	8D.1
% Sludge treatment process - raw sludge liming	1.2%	0.0%	8D.2
% Sludge treatment process - conventional AD	30.7%	0.0%	8D.3
% Sludge treatment process - advanced AD	58.1%	0.0%	8D.4
% Sludge treatment process - incineration of raw sludge	9.6%	0.0%	8D.5
% Sludge treatment process - other (specify)	0.0%	0.0%	8D.6
% Sludge treatment process – Total	100.0%	0.0%	8D.7
% Sludge disposal route - landfill, raw	0.0%	0.0%	8D.8
% Sludge disposal route - landfill, partly treated	0.0%	0.0%	8D.9
% Sludge disposal route - land restoration/ reclamation	0.7%	0.0%	8D.10
% Sludge disposal route - sludge recycled to farmland	99.3%	0.0%	8D.11
% Sludge disposal route - other (specify)	0.0%	0.0%	8D.12
% Sludge disposal route – Total	100.0%	0.0%	8D.13

Section 9
Innovation

Table 9A: Innovation competition

This table shows how much we have collected from customers for the innovation fund and how the funds will be spent.

Line description Units: £m	Current year	RAG 4 Ref
Allocated innovation competition fund price control revenue	8.106	9A.1
Innovation fund income from customers	7.935	9A.2
Income from customers to fund innovation projects the company is leading on	7.729	9A.3
Income from customers as part of the inflation top-up mechanism	0.000	9A.4
Income from other water companies to fund innovation projects the company is leading on	0.000	9A.5
Income from customers that is transferred to other companies as part of the innovation fund	10.222	9A.6
Non-price control revenue (e.g. royalties)	0.000	9A.7
Administration charge for innovation partner	0.309	9A.8

Line description * excluding 10% partnership contribution	Total amount of funding awarded to the lead company through the innovation fund	Total amount of inflation top-up funding received	Forecast expenditure on innovation fund projects in year*	Actual expenditure on innovation fund projects in year *	Difference between actual and forecast expenditure	Forecast project lifecycle expenditure on innovation fund projects*	Cumulative actual expenditure on innovation fund projects*
AI & sewer defects analysis	0.189	0.000	0.000	0.000	0.000	0.189	0.000
Supporting customers in vulnerable circumstances	0.215	0.000	0.000	0.000	0.000	0.215	0.000
Spring - UK Water Sector Innovation Centre of Excellence	0.250	0.000	0.000	0.000	0.000	0.250	0.000
Transforming the energy balance of wastewater treatment	6.260	0.000	1.209	0.898	-0.311	6.260	0.898

Line description * excluding 10% partnership contribution	Total amount of funding awarded to the lead company through the innovation fund	Total amount of inflation top-up funding received	Forecast expenditure on innovation fund projects in year*	Actual expenditure on innovation fund projects in year *	Difference between actual and forecast expenditure	Forecast project lifecycle expenditure on innovation fund projects*	Cumulative actual expenditure on innovation fund projects*
Artificial Intelligence of Things Enabling Autonomous Waste Catchments	1.998	0.000	0.000	0.000	0.000	1.998	0.000
Catchment Systems Thinking Cooperative (CaSTCo)	6.395	0.000	0.000	0.000	0.000	6.395	0.000
Pipebots for rising mains	0.231	0.000	0.207	0.208	0.001	0.231	0.208
The Use of Sub-Seasonal Forecasting to Improve Operational Decision Making	0.679	0.000	0.060	0.045	-0.015	0.679	0.045
Towards incentivisation for community-centric rainwater management	0.225	0.000	0.022	0.061	0.039	0.225	0.061
Unlocking digital twins	0.335	0.000	0.284	0.000	-0.284	0.335	0.000
A HERU for Screenings	0.198	0.000	0.000	0.000	0.000	0.198	0.000
Designer Liner	0.174	0.000	0.000	0.000	0.000	0.174	0.000
Support for All	0.632	0.000	0.000	0.000	0.000	0.632	0.000
Tap Water Forensics	0.371	0.000	0.000	0.000	0.000	0.371	0.000
Unlocking bioresource market growth	0.314	0.000	0.000	0.000	0.000	0.314	0.000
Catalysing Net-Zero	0.762	0.000	0.000	0.000	0.000	0.762	0.000
National leakage research and test centre	5.320	0.000	0.000	0.000	0.000	5.320	0.000
Enabling Water Smart Communities	5.535	0.000	0.000	0.000	0.000	5.535	0.000
Total	30.084	0.000	1.782	1.212	-0.570	30.084	1.212

line description * excluding 10% partnership contribution	Difference between actual and forecast expenditure	Allowed future expenditure on innovation fund projects *	In year expenditure on innovation projects funded by shareholders of the lead water company	In year expenditure on innovation projects funded by project partner contribution	Cumulative expenditure on innovation projects funded by shareholders of the lead water company	Cumulative expenditure on innovation projects funded by project partner contributions	RAG 4 ref
AI & sewer defects analysis	-0.189	0.000	0.000	0.004	0.000	0.004	9A.9
Supporting customers in vulnerable circumstances	-0.215	0.000	0.000	0.012	0.000	0.012	9A.10
Spring - UK Water Sector Innovation Centre of Excellence	-0.250	0.000	0.000	0.033	0.000	0.033	9A.11
Transforming the energy balance of wastewater treatment	-5.362	5.051	0.100	0.000	0.100	0.000	9A.12
Artificial Intelligence of Things Enabling Autonomous Waste Catchments	-1.998	1.998	0.000	0.057	0.000	0.057	9A.13
Catchment Systems Thinking Cooperative (CaSTCo)	-6.395	6.395	0.000	0.040	0.000	0.040	9A.14
Pipebots for rising mains	-0.023	0.024	0.023	0.000	0.023	0.000	9A.15
The Use of Sub-Seasonal Forecasting to Improve Operational Decision Making	-0.634	0.619	0.005	0.000	0.005	0.000	9A.16
Towards incentivisation for community-centric rainwater management	-0.164	0.203	0.007	0.000	0.007	0.000	9A.17
Unlocking digital twins	-0.335	0.051	0.000	0.000	0.000	0.000	9A.18
A HERU for Screenings	-0.198	0.000	0.000	0.002	0.000	0.002	9A.19
Designer Liner	-0.174	0.000	0.000	0.004	0.000	0.004	9A.20
Support for All	-0.632	0.000	0.000	0.000	0.000	0.000	9A.21
Tap Water Forensics	-0.371	0.000	0.000	0.000	0.000	0.000	9A.22
Unlocking bioresource market growth	-0.314	0.000	0.000	0.000	0.000	0.000	9A.23
Catalysing Net-Zero	-0.762	0.000	0.000	0.000	0.000	0.000	9A.24
National leakage research and test centre	-5.320	0.000	0.000	0.056	0.000	0.056	9A.25
Enabling Water Smart Communities	-5.535	0.000	0.000	0.190	0.000	0.190	9A.26
Total	-28.872	14.341	0.135	0.397	0.135	0.397	9A.27

Section 10
Green Recovery

About our Green Economic Recovery ("GER") plans

This is the required narrative as requested as part of the additional reporting requirements set out in Ofwat's Final Decisions document[78] published in July 2021.

Our GER programme focuses on the installation of 204,700 additional smart meters in AMP7, including new household meter installations in the Thames Valley region, the replacement of existing basic non-household meters and the installation of bulk meters.

There has been no delivery on the programme in 2022/23, although £1.062m has been spent on preparatory work for meter installations.

We are engaging with Ofwat to consider removal of the linkage between our Y5 3YAA leakage performance and the delivery of this plan. The outcome of this discussion could impact the delivery of the GER programme.

Table 10A: Green recovery data capture additional items for the 12 months ended 31 March 2023

	Units	Basic meter	RAG 4 Ref	Main table Ref
Total length of new potable mains	nr	0.0	10A.1	6C.4
Number of lead communication pipes replaced for water quality	km	0	10A.2	6C.21

	Units	Basic meter	AMR meter	AMI meter	RAG 4 Ref	Main table Ref
New selective meters installed for existing customers	£m			1.062	10A.3	6D.2
New business meters installed for existing customers	£m			0.000	10A.4	6D.3
Residential meters renewed	£m			0.000	10A.5	6D.4
Business meters renewed	£m			0.000	10A.6	6D.5
Replacement of basic meters with smart meters for residential customers	000s			0.000	10A.7	6D.7
Replacement of AMR meter with AMI meters for residential customers	000s			0.000	10A.8	6D.8
Replacement of basic meters with smart meters for business customers	000s			0.000	10A.9	6D.9
Replacement of AMR meter with AMI meters for business customers	000s			0.000	10A.10	6D.10

[78] https://www.ofwat.gov.uk/publication/green-economic-recovery-final-decisions/

	Units	Basic meter	AMR meter	AMI meter	RAG 4 Ref	Main table Ref
New residential meters installed for existing customers – supply-demand balance benefit	000s		0.00	0.00	10A.11	6D.11
New business meters installed for existing customers – supply-demand balance benefit	000s			0.00	10A.12	6D.12
Replacement of basic meter with smart meters for residential customers – supply-demand balance benefit	000s		0.00	0.00	10A.13	6D.13
Replacement of AMR meter with AMI meter for residential customers– supply-demand balance benefit	000s			0.00	10A.14	6D.14
Replacement of basic meter with smart meters for business customers – supply-demand balance benefit	Ml/d			0.00	10A.15	6D.15
Replacement of AMR meter with AMI meter for business customers– supply-demand balance benefit	Ml/d			0.00	10A.16	6D.16
New selective meters installed for existing customers	Ml/d		0.00	0.00	10A.17	6D.17
New business meters installed for existing customers	Ml/d			0.00	10A.18	6D.18
Residential meters renewed	Ml/d		0.00	0.00	10A.19	6D.19
Business meters renewed	Ml/d			0.00	10A.20	6D.20

Leakage activities	Units	Input	RAG 4 Ref	Main table Ref
Leakage improvements delivering benefits in 2020-25	Ml/d	0.00	10A.21	6D.23

	Units		RAG 4 Ref	Main table Ref
Additional storm tank capacity provided at STWs (grey infrastructure)	m3	0.00	10A.22	7E.11
Additional effective storm storage capacity at sewage treatment work (delivered through green infrastructure)	m3	0.00	10A.23	7E.12
Additional volume of network storage at CSOs etc to reduce spill frequency (grey infrastructure)	m3	0.00	10A.24	7E.13
Additional effective storage in the network delivered through green infrastructure	m3	0.00	10A.25	7E.14

Table 10B: Water common performance commitments relevant to green recovery reporting

Line description *Unique Reference*	Unit	Standardising data indicator	Standardising data numerical value	Performance level - actual impacts of green recovery investment element only (current reporting year)	Performance level - actual impacts of green recovery investment element only calculated (i.e. standardised)	RAG 4 Ref	Main Table Ref
Per capita consumption (PCC) *BW05*	lpd	Total household population	10,276	0	0.00	10B.1	3F.4

Line description Unique Reference	Unit	Performance level - actual					RAG 4 Ref	Main Table Ref
		(2020/21)	(2021/22)	(2022-23)	(2023-24)	(2024-25)		
Leakage - actual including impacts of green recovery investment BW04	Ml/d	593.2	593.8	619.7			10B.2	3F.5
Leakage - actual impacts of green recovery investment element only *BW04*	Ml/d	0	0	0			10B.2	3F.5
Per capita consumption (PCC) - actual impacts of green recovery investment element only *BW05*	lpd	0	0	0			10B.3	3F.6

Table 10C: Wastewater common performance commitments relevant to green recovery reporting

Line description *Unique Reference*	Unit	Standardising data indicator	Standardising data numerical value	Performance level - actual impacts of green recovery investment element only (current reporting year)	Performance level - actual impacts of green recovery investment element only calculated (i.e. standardised)	RAG 4 Ref	Main Table Ref
Internal sewer flooding - customer proactively reported *CS03*	Number per 10,000 sewer connections	Number of sewer connections	6,139.596	0	0	10C.1	3G.1
Internal sewer flooding - company reactively identified (i.e. neighbouring properties) *CS03*	Number per 10,000 sewer connections	Number of sewer connections	6,139.596	0	0	10C.2	3G.2
Internal sewer flooding *CS03*	Number per 10,000 sewer connections	Number of sewer connections	6,139.596	0	0	10C.3	3G.3
Pollution Incidents *ES01*	Number per 10,000 km of sewer length	Sewer length in km	10,8980	0	0	10C.4	3G.4

Line description *Unique Reference*	Unit	Decimal places	Performance level - actual impacts of green recovery investment element only (current reporting year)	RAG 4 Ref	Main Table Ref
Risk of sewer flooding in a storm *DS01*	%	2	0	10C.5	3E.5

Line description *Unique Reference*	Total pe served	Total pe in excluded catchments	Percentage of total pe in excluded catchments	Performance level - actual impacts of green recovery investment element only (current reporting year)			
				Total pe Option 1a	% of total pe Option 1a	Total pe Option 1b	%of total pe Option 1b
Risk of sewer flooding in a storm	15,018,284	24,303	0.16%	0	0	0	0

Performance level - actual impacts of green recovery investment element only (current reporting year)		
Vulnerability risk grade		
Low	Medium	High
Percentage of total population served		
0.0%	0.0%	0.0%

Table 10D: Bespoke performance commitments relevant to green recovery reporting

Line description	Ref	Unit	Performance level - impacts of green recovery investment element only		RAG 4 Ref
			Previous reporting year	Current reporting year	
Installing new smart meters in London	M01	nr	0	0	10D.1
Replacing existing meters with smart meters in London	M02	nr	0	0	10D.2

Table 10E: Green recovery data capture reconciliation model input for the 12 months ended 31 March 2023

Scheme 1: Smart Meters								
Total allowance, £71.917m					2021-22		2022-23	
		Allowance (£m)	Unit	Component level at completion	Component level to date	Percentage complete	Component level to date	Percentage complete
Component 1	Number of new household smart meter installations completed in the Thames Valley water resource zones	59.322	000s	200	0	0.00%	0	0%
Component 2	Number of non-household basic meters replaced with smart meters	0.178	000s	3	0	0.00%	0	0%
Component 4	Number of new small bulk smart meter installations	0.872	000s	1.5	0	0.00%	0	0%
Component 6	Number of new large bulk smart meter installations	0.545	000s	0.2	0	0.00%	0	0%
Component 8	Communication coverage of household properties in the Slough-Wycombe-Aylesbury (SWA), Henley and Kennet Valley water resource zones.	11	%	96%	0%	0.00%	0	0%

		2023-24		2024-25		2025-26		RAG 4 Ref
		Component level to date	Percentage complete	Component level to date	Percentage complete	Component level to date	Percentage complete	
Component 1	Number of new household smart meter installations completed in the Thames Valley water resource zones	0	0%	0	0%			10E.51
Component 2	Number of non-household basic meters replaced with smart meters	0	0%	0	0%			10E.52
Component 4	Number of new small bulk smart meter installations	0	0%	0	0%			10E.53
Component 6	Number of new large bulk smart meter installations	0	0%	0	0%			10E.54
Component 8	Communication coverage of household properties in the Slough-Wycombe-Aylesbury (SWA), Henley and Kennet Valley water resource zones.	0	0%	0	0%			10E.55

The allowances by component include a proportion of support costs where appropriate. 96% is the minimum communication coverage that we expect to achieve in the Slough-Wycombe-Aylesbury, Henley and Kennet Valley water resources zones.

Section 11 Greenhouse gas emissions

Table 11A: Operational greenhouse gas ("GHG") emissions reporting for the 12 months ended 31 March 2022

Line description	Water	Wastewater	Total	RAG 4 Ref
	tCO_2e	tCO_2e	tCO_2e	
Burning of fossil fuels (location-based)	1,107.459	15,516.774	16,624.233	11A.1
Burning of fossil fuels (market-based)	1,107.459	15,516.774	16,624.233	11A.2
Process and fugitive emissions	321.839	190,038.920	190,360.759	11A.3
Vehicle transport	5,220.836	8,094.407	13,315.243	11A.4
Emissions from land	-	-	-	11A.5
Total scope one emissions (location-based)	6,650.134	213,650.101	220,300.234	11A.6
Total scope one emissions (market-based)	6,650.134	213,650.101	220,300.234	11A.7
Scope one emissions; GHG type CO2	6,242.019	23,254.232	29,496.251	11A.8
Scope one emissions; GHG type CH4	1.251	87,763.617	87,764.868	11A.9
Scope one emissions; GHG type N2O	406.864	102,548.270	102,955.134	11A.10
Scope one emissions: GHG other types	0.000	83.981	83.981	11A.11
Purchased electricity (location-based)	97,951.370	75,649.271	173,600.641	11A.12
Purchased electricity (market-based)	-	-	-	11A.13
Purchased heat	-	-	-	11A.14
Electric vehicles	1.539	3.124	4.663	11A.15
Removal of electricity to charge electric vehicles at site	-	-	-	11A.16
Total scope two emissions (location-based)	97,952.909	75,652.395	173,605.304	11A.17
Total scope two emissions (market-based)	1.539	3.124	4.663	11A.18
Scope two emissions; GHG type CO2	96,853.737	74,803.467	171,657.204	11A.19
Scope two emissions; GHG type CH4	405.225	312.969	718.193	11A.20
Scope two emissions; GHG type N2O	693.947	535.959	1,229.906	11A.21
Scope two emissions: GHG other types	-	-	-	11A.22
Business travel	318.581	646.817	965.398	11A.23
Outsourced activities	8,487.636	18,910.309	27,397.945	11A.24
Purchased electricity; extraction, production, transmission and distribution (location-based)	34,529.656	26,667.757	61,197.413	11A.25
Purchased electricity; extraction, production, transmission and distribution (market-based)	11,102.979	8,574.992	19,677.971	11A.26
Purchased heat; extraction, production, transmission and distribution	-	-	-	11A.27
Purchased fuels; extraction, production, transmission and distribution	4,359.516	7,115.752	11,475.268	11A.28
Chemicals	6,189.392	4,067.672	10,257.063	11A.29
Disposal of waste	607.158	38,194.222	38,801.380	11A.30
Total scope three emissions (location-based)	54,491.939	95,602.528	150,094.468	11A.31
Total scope three emissions (market-based)	31,065.262	77,509.764	108,575.026	11A.32
Scope three emissions; GHG type CO2	17,759.969	36,413.085	54,173.054	11A.33
Scope three emissions; GHG type CH4	318.107	27,845.048	28,163.155	11A.34
Scope three emissions; GHG type N2O	177.520	306.540	484.060	11A.35
Scope three emissions: GHG other types	36,236.344	31,037.855	67,274.199	11A.36
Gross operational emissions (location-based)	159,094.982	384,905.024	544,000.005	11A.37
Gross operational emissions (market-based)	37,716.934	291,162.988	328,879.923	11A.38

Line description	Water	Wastewater	Total	RAG 4 Ref
	tCO_2e	tCO_2e	tCO_2e	
Exported renewables	-	3,539.187	3,539.187	11A.39
Exported biomethane	-	4,255.078	4,255.078	11A.40
Insets	-	-	-	11A.41
Other emissions reductions	-	-	-	11A.42
Total emissions reductions	-	7,794.265	7,794.265	11A.43
Net annual emissions (location-based)	159,094.982	377,110.759	536,205.740	11A.44
Net annual emissions (market-based)	37,716.934	291,162.988	328,879.923	11A.45
	kgCO2e/Ml	kgCO2e/Ml		
Emissions per Ml of treated water	169.752			11A.46
Emissions per Ml of sewage treated		241.813		11A.47
	tCO2e	tCO2e		
Green tariff electricity	97,951.370	75,649.271	173,600.641	11A.48
Capital projects (cradle-to-gate)	-	-	-	11A.49
Capital projects (cradle-to-build)	219,713.542	204,204.990	423,918.533	11A.50
Purchased goods and services	14,677.027	22,977.981	37,655.008	11A.51

Additional commentary on greenhouse gas emissions data

Line 11A.36: Scope three emissions: GHG other types

This line covers the chemicals, waste administration and electricity / fuels for which an emissions split is unavailable.

Line 11A.45: Net annual emissions (market-based)

Market based gross and net emissions are equal, because – unlike location-based – the table does not account for emissions reductions (exports).

Line 11A.48: Scope three emissions: GHG other types

We procure 100% REGO-backed electricity.[79]

Line 11A.51: Purchased goods and services

This is the sum of lines 11A.24 outsourced activities and 11A.29 chemicals. Please note that these emissions are already included within our existing operational carbon reporting figures under Scope 3 emissions, and include services provided by our third parties related to operational activities such as transport, mobile plant fuel usage and office services; and emissions associated with our chemical purchase and usage.

[79] *Ofgem certificates called Renewable Energy Guarantees of Origin ("REGO") demonstrate that electricity has been generated from renewable sources.*

Strengths, Weaknesses, Opportunities and Threats ("SWOT") analysis of our approach to reducing operational GHG emissions.

Strengths

Our approach to carbon accounting is aligned with the principles of the GHG protocol and PAS2080.

We've improved the quality of our carbon reporting and now have a final cradle to build capital report across all delivery offices and consistent reporting using the standardised Carbon Accounting Workbook ("CAW") provided by UK Water Industry Research ("UKWIR") for our operational activities.

We've approaching capital and operational carbon in parallel and have established a net zero task force to deliver our route map and support the UK targets for becoming carbon neutral.

We're engaging within and outside the industry to collaborate to implement innovative and creative solutions to the challenges faced in reducing carbon. We use 100% renewable electricity and have reduced our consumption of fossil fuels as part of the efficient reduction of our scope 1 and 2 emissions.

We've progressed our wastewater treatment process emission monitoring.

Weaknesses

Our carbon accounting tools are not suitable to meet the granularity in 2022/23 reporting expectations and also need updating to meet future requirements.

There isn't a consistent industry approach to wider Scope 3 carbon reporting and measurement, beyond items included within the CAW.

The industry understanding of Wastewater treatment process emissions and technologies available to control them needs to be developed.

The methodology and indicators currently used for reporting both capital and operational carbon do not sufficiently support demonstrating our actual performance and efficiency in reducing carbon throughout the development and delivery of a project.

Opportunities

We're improving our insights on emissions from enhanced data quality and granularity which will help inform the strategy to reduce these carbon emissions.

Our increased focus on capital carbon helps to identify and support the uptake of new technologies and approaches to reduce them.

We have identified the following operational opportunities:

- Gas to grid Biomethane sleeving to reduce fossil fuel use
- Carbon Capture on biomethane plants
- Low carbon nutrient recovery from sewage
- Low carbon wastewater treatment processes
- Reduction in fugitive emissions from sludge treatment
- Accounting for sludge to land as low carbon fertilizer

We're developing a carbon culture and increasing our technical knowledge and competencies and will implement robust training to improve further.

We'll work with our procurement teams and supply chain to develop opportunities to integrate and reinforce emissions reporting requirements and reduction into contracts and frameworks.

We'll engage with Ofwat and others to develop carbon reporting processes in an appropriate, timely and beneficial way consistent with other mandatory reporting requirements.

Threats

There are concerns that PR24 reporting requirements could become inconsistent with other regulatory reporting criteria, such as the TCFD and Streamlined Energy and Carbon Reporting ("SECR").

The lack of an agreed and consistent standards in the industry does not allow comparing or evaluating the performance of the water section in an objective manner.

The current approach is not suited to support the definition of carbon reduction targets.

There is a lack of clear and timely guidance for reporting. For instance, the use of a single standard methodology or tool has not been agreed yet across the industry in relation to Scope 3.

There is a lack of technological and market progress in delivering low or no carbon solutions at efficient prices.

There is uncertainty around timing and availability of funding to support UK targets.

Forecasts of capital spend show an increasing trend in capital carbon emissions, which threatens the achievement of the 2050 Net Zero goal.

The use of location-based reporting over market-based reporting will reduce focus on long term emissions by including electricity related emissions.

We've identified significant changes to baseline emissions through improved understanding of process emissions and inclusion of additional scope 3 with limited ability to influence them.

There may be conflicting environmental (or other) drivers.

About this report

This is the regulatory accounts that we are required to publish under Condition F of the Instrument of Appointment ("licence") of Thames Water Utilities Limited (referred to in this report as "Thames Water" or the "Company") as a water and sewerage undertaker under the Water Industry Act 1991.

Our licence can be found on the Ofwat website: https://www.ofwat.gov.uk/regulated-companies/ofwat-industry-overview/licences/

We have prepared this report in accordance with the Regulatory Accounting Guidelines issued by Ofwat which are:

- RAG 1.09 – Principles and guidelines for regulatory reporting under the 'new UK GAAP' regime;
- RAG 2.09 – Guideline for classification of costs across the price controls;
- RAG 3.14 – Guideline for the format and disclosures for the Annual Performance Report;
- RAG 4.11 – Guideline for the table definitions in the Annual Performance Report; and
- RAG 5.07 – Guideline for transfer pricing in the water and sewerage sectors


Thames
Water