TMS-DD-036: Strategic Narrative

Draft determination response

Contents

1. Executive Summary

Our realistic and ambitious plan focuses on delivering the priorities for our customers, communities and the environment

A successful Thames Water matters for our customers, communities and the environment, but also for taxpayers and the UK economy. Our PR24 plan outlines what we aim to deliver for our customers and the environment.

Our plan reflects the priorities of our customers, as evidenced by our focussed customer research and insight work undertaken between 2021 and 2023. Customers' top priorities are delivering safe and resilient water supplies and addressing concerns on performance and the environment in wastewater.

We have developed and refined a highly ambitious and deliverable plan. Since October 2023 we've listened to and engaged with all our regulators, and we adjusted our AMP8 plan in April 2024 to go further on delivering new environmental requirements (including the Water Industry National Environment Programme (WINEP). Since April 2024 we have refined our business plan further to take into account updated regulatory guidance and costs. The additional costs we are asking our customers to fund, as summarised in Table 1, are essential if we are to deliver the improvements set out in our plan to benefit our customers, communities and the environment.

Our plan includes £16.7bn of capital expenditure added to the RCV enabling cost recovery spread over future decades. We need to finance this investment using private capital markets and attract around £3.3bn of new equity. To do this we need to be an investible proposition for new shareholders.

Our concerns with Ofwat's draft determination

To enable us to attract the investment to deliver for our customers, communities and the environment, Ofwat's draft determination requires recalibration across all parts of the regulatory framework.

Ofwat's final determination will materially influence whether we attract this investment. We summarise our concerns with Ofwat's draft determination below.

Costs allowances

Ofwat's draft determination scales back our requested allowances in important areas. These interventions create a shortfall in our funding of £5.3bn against our April 2024 PR24 business plan submission and that which we are allowed to recover from our customers to meet our statutory obligations and a shortfall of £7.4bn against our draft determination response updated totex.

There are deficiencies in Ofwat's approach to determining these allowances, and we set these out along with alternative proposals, which need to be addressed, to ensure that we are granted the appropriate allowances to deliver the priorities of our customers. These deficiencies sit across:

Base cost model

- Ofwat's base cost model does not sufficiently capture our company-specific and regional characteristics.
- These include higher input costs of operating a business in London, the higher wages and property costs relative to other areas in England, the high levels of population transience in our region and the relative age and complexity of our asset base.
- We highlight specific areas of concern in this document and provide further evidence in our base cost technical document (TMS-DD-037).

Enhancement cost allowances

- Ofwat's assessment declares some investments as already allowed for in base (e.g. capital maintenance), effectively disallows others (e.g. our investment to upgrade our wastewater network) and applies significant efficiency challenges to statutory schemes.
- Ofwat has applied efficiency benchmarks to our enhancement programme using an approach that is simplistic and which puts undue weight on top-down econometric estimates over bottom up, engineering-based assessments.
- The proposed reductions to our wastewater schemes will put at risk our investment programme to deliver our statutory obligations and sets back our strategy to improve the security of water supply. Given the increased national attention on addressing pollution challenges and our specific issues which are well publicised, we are concerned that Ofwat's cut to our allowances will prevent us from delivering the necessary changes.
- We highlight specific areas of concern in this document and provide further evidence in our enhancement cost technical document (TMS-DD-038).

Efficiency assumptions

- On catch-up efficiency, we believe that Ofwat's approach to benchmarking companies against the upper quartile for totex is unreasonable where models lack robustness and where company specifics are not taken into account exposing Thames Water to unrealistic targets.
- With respect to frontier shift efficiency, we reject Ofwat's 1% frontier shift as this level of efficiency improvement is not aligned with UK productivity performance.

Outcomes

The incorrect calibration of Performance Commitments (PCs) and Outcome Delivery Incentives (ODIs) has resulted in unachievable targets that will result in extreme penalties, which risk undermining rather than enabling our continued transformation. In particular:

- Overall Performance Commitment Levels (PCLs) have been set unrealistically high because Ofwat has assumed the AMP7 outturn is where it set the PR19 PCLs. It is clear that this is not a reasonable position based on industry performance during the period.
- As such, the expected distribution of ODIs is skewed to the downside.
- Ofwat has increased the size of ODIs compared to AMP7 which further increases the downside exposure (for a given distribution of returns), and this is not appropriate.
- Ofwat has made no other adjustments in its regulatory framework to neutralise this, for example by reflecting an adjustment to the allowed cost of capital.

The result of the miscalibration is that we are exposed to material and excessive ODI penalties of approximately £1.6bn across AMP8 and customer penalties (MeXes) of over £400m. A large portion of this net penalty is driven by the £1.1bn forecast penalty for external sewer flooding, for which we request Ofwat to consider our resubmitted data.

Risk and Return

The negative skew created through unfunded expenditures, negative expected ODI and MeXes payments and expected underperformance on finance costs results in an expected under-performance against our allowed return on equity of around 775bps of RoRE. This requires recalibration at the source, or a considerable increase in allowed returns to compensate investors for bearing this risk.

- **Allowed return.** A pre-requisite for the delivery of our ambitious plan for our customers, communities and the environment is our ability to finance the investment programme. This rests on our ability to attract substantial new equity investment into our business. A return on equity which sits <2.5% above gilt yields and <1% above investment grade corporate bond yields does not provide sufficient reward for the risk that shareholders take on as the owner of a water and wastewater company.
- **Financial resilience.** We are committed to securing greater financial resilience but will need to balance the requirements of achieving new equity injection with the pace of de-gearing. Redistributing funds towards de-gearing in parallel to restricting dividend yields presents significant downside risk and disincentivises investors. If we fail to attract these investors, the detrimental impact on our customers, communities and the environment will be very significant.
- **Downside risk.** The inherent risk in our draft determination is excessive and puts the investibility of our plan in danger. While Ofwat has materially moved on risk allocation, significant negative asymmetry and variance remain. This is largely driven by totex allowance cuts, unmitigated asymmetry on PCD design, and several performance commitment targets set significantly beyond current levels of industry and company performance with limited use of dead bands.

Ofwat's unrealistic draft determination will prevent us from attracting investment

The weighted average cost of capital (WACC) needs to be set at a level that reflects the risk to which equity and debt providers are exposed. Ofwat includes in its revenue allowances a return on the regulatory capital value (RCV) that reflects the industry-wide WACC that it calculates, based on a notionally geared and efficient company. We have made various arguments elsewhere in our draft determination response that seek to influence Ofwat's calculation of the industry-wide WACC (TMS-DD-040).

However, investors invest in real world companies and look for a return on capital that reflects the risk they perceive in that business. Investors perceive the risk of investing in Thames Water as greater than the industry average. This reflects the age and complexity of our asset base, and the historic performance of the company against previous regulatory settlements. It also reflects wider regulatory risks the company is managing, for example in respect of investigations, enforcement action and prosecutions.

As we move through the price review process, we are seeking to attract c.£3.3bn of equity from existing and new shareholders. We remain of the view that a market-led solution will lead to a better and more effective outcome for customers and the environment.

Moody's has provided us with a negative rating outlook:

> "reflecting the increased likelihood that (1) the Final Determination expected later this year would deter existing or new shareholders from providing sufficient additional equity during the next regulatory period to allow the company to deliver its investment programme; and (2) in the absence of a pathway to future equity support, existing lenders may be reluctant to provide the company with the required flexibility to improve its immediate liquidity runway by raising new debt."

At a sector level, the PR24 final determination needs to work as a package in the round. Financial and operational incentive parameters must be balanced and offer incentives for stretch while being achievable. If parameters are overly stretched across all areas against a backdrop of significant reductions in allowances compared to company plans, the sector will be unable to deliver the levels of performance and resilience in respect of services that are expected, and financial resilience will also suffer as companies seek to finance funding gaps and find it hard to attract equity. This will be most acute for Thames Water given our credit rating and performance outlook.

We provide a way forward that seeks to re-calibrate Ofwat's decisions to enable financeability

Ex-ante funding of base and enhancement costs

In our draft determination response, we demonstrate why Ofwat's cost benchmarks do not reflect the costs we justifiably incur in providing our services or when we deliver the wide range of enhancement schemes we plan to deliver in AMP8.

Through the adjustments we propose to the base cost modelling (including cost adjustment claims) we evidence why Ofwat should set our water and wastewater allowance equal to the costs we expect to incur. Where Ofwat seeks to overlay efficiency targets that are simply unrealistic, as a principle it must adopt a 5 year glidepath to enable companies to achieve Ofwat's benchmarked efficiency challenge through the control period. This is particularly important for Thames Water, given our starting point.

We also present evidence and argument as to why Ofwat's approach to benchmarking enhancement cases was not appropriate. In our view, we have justified £3.8bn of water and £6.4bn of wastewater enhancement cases to Ofwat's required standard and this funding should be included upfront in our totex and revenue allowances.

Unlocking funding where there is greater uncertainty

We welcome Ofwat's introduction of gated allowances into PR24. We think these provide an appropriate mechanism to enable companies more time to produce the detailed cost justifications that Ofwat requires to unlock customer funding – allowing schemes to be delivered but providing appropriate customer protection through the process.

It is our view that Ofwat should apply gated processes to those enhancement cases where it has not expressly included funding in our totex and upfront revenue requirement.

We are also keen that Ofwat streamlines its in-period processes and aligns on a single gated allowance process. Our strong view is that Ofwat's 'delivery mechanism' as set out in the draft determination is the appropriate process for Ofwat to follow. This process enables us to apply for funding (with evidence of need, optioneering and unit cost efficiency) each year, unlocking funding in the following year, aligned with when the costs will be incurred. In this way the 'delivery mechanism' allows us to finance the investment we need to make, helping us to maximise what we can deliver for customers and the environment. If Ofwat uses gated allowances that create a time lag between costs incurred and costs recovered, this will consume financeability headroom and ultimately curtail what we can deliver. As an aside, it is important that Ofwat take account of the financeability impact of its chosen gated processes in any assessment of company financeability, even one conducted on the basis of a notionally geared and efficient company.

Incentivising outcomes for customers

On performance, we welcome Ofwat's move away from setting targets on the basis of a forward-looking view of industry upper quartile performance. This was the approach taken by Ofwat at PR19. Across common performance commitments, only one company is in a net overperformance position so far in AMP7, showing just how challenging the PR19 PCLs are.

We agree that Ofwat should set performance commitment levels at the median level across the industry rather than upper quartile, as it has done in its draft determination. We think it is important that Ofwat calculates the median based on actual industry outturn at the end of AMP7, rather than assuming as Ofwat did in its draft determination that the industry will outturn AMP7 in line with the PR19 PCLs. In calculating the median based on this assumed outturn, Ofwat has layered an additional performance challenge on companies, which does not reflect the AMP8 starting position.

If Ofwat were to amend its calculation of the median in this way, this would change our AMP8 performance commitments as set out in section 5 of this document.

Providing a balanced risk and return package

It is appropriate for Ofwat to put in place an incentive framework that rewards companies when they do more for customers and the environment and penalises them if they do not deliver what customers have paid for or incur costs that are not justified. However, it is important that the overall balance of these incentives is reasonable and that the balance of risk created by those incentives is reflected in the WACC. If these incentives expose companies to more downside than upside, this will have the effect of skewing expected returns to the downside, which will shift the company's financing costs up. If this upward shift is not reflected in the WACC the company will not be able to finance its capital programme for the WACC that Ofwat allows and it may struggle to attract private capital as the downside risk exposure will not be commensurate with the return.

An important element in ensuring these incentives are set reasonably is setting cost and performance targets at an achievable level for the company. We have set out what this would mean for our target costs and performance levels in section 5 of this document.

We understand the importance of exposing companies to upside and downside risk around these targets to provide incentives for improved performance. Given our track record and the risk that new investors coming into the company will bear in relation to the effectiveness and pace of the company's turnaround, placing a limit on downside exposure will be key to our ability to attract new investors and secure the scale of equity we need to deliver our plan.

Enhanced oversight to support our turnaround

In its draft determination Ofwat seeks to establish a turnaround oversight regime, for companies 'where we have significant concerns about their performance in-the-round'. While we accept the need for enhanced oversight of our business, we do not accept the specifics of the arrangements that Ofwat proposed in its draft determination. Some features of Ofwat's proposed turnaround oversight regime risk being overly complex and impose processes on our business that are not aligned with the effective and efficient delivery of our plan.

We have recently agreed undertakings with Ofwat to take the steps we can take to restore our investment grade credit ratings. These include enhanced reporting and provision of information and the appointment of a Monitor, and they fully meet the aims of Ofwat's turnaround oversight regime, as set out in the draft determination, rendering further oversight unnecessary and disproportionate. These undertakings ensure that Ofwat has full visibility of what we are doing to improve our financial resilience, as indicated by the restoration of our investment grade credit ratings, and to improve the performance of our company and deliver its turnaround, as set out in our business plan.

Aligning the Aggregate Sharing Mechanism with Turnaround Oversight

We welcome the creation of an Aggregate Sharing Mechanism (ASM). Ofgem has a slightly different approach where outcomes and costs (and financial) performance are all aggregated into its Return Adjustment Mechanism (RAM). Ofgem's approach provides an overarching risk mitigation across the whole regulatory package. We suggest Ofwat give this concept more consideration.

For a company like ours, in a turnaround situation and subject to a turnaround oversight regime, we suggest a Turnaround Oversight Regime Aggregate Sharing Mechanism (TOR-ASM) would provide a better balance of risk and mean that any miscalibration of PCLs and ODIs would be less detrimental to turnaround progress.

Such a TOR-ASM could incorporate costs and outcomes performance. Beyond a threshold of +/- 100bps, risk sharing should be markedly increased (20% company / 80% customers) for both costs and performance incentives (with 100bps cap and collar on each applied separately). This would maintain sufficient downside exposure for the company to work hard to avoid it and the aggregate nature of the cap and collar would preserve incentives at the margin. But it would offer investors improved downside protection (by forgoing upside performance gains) and would support raising new equity and debt. We propose that this should apply for the duration of the Turnaround Oversight Regime (TOR). Once the TOR is ended, then the TOR-ASM could be moderated, or removed as the industry-wide ASMs should then be sufficient.

The way forward

Our Board, our management and our people are enthusiastic about the opportunities available to us in AMP8. We are excited by the ambitious outcomes we could deliver for customers, communities and the environment and about the role we could play in enabling growth across our economy.

We also know that our plan will be challenging to deliver. It will require significant injection of new equity and debt. We have set out a number of changes that Ofwat could make with the framework of its draft determination to improve our ability to attract this equity. We are committed to working through a process to raise this equity. We are further aware that the financing of our plan rests on being able to issue new debt. We are committed to doing everything we can to restore our investment grade credit ratings, including through the process of raising equity and the development and delivery of a business plan that will see our company turned around.

Even with these changes, it will still be challenging to deliver our plan. But it is a challenge we are willing to take on in the best interests of our customers and the environment. Without these changes we are clear that the delivery of our plan will simply not be possible.

2. Our key positions

2.1	**We are focused on delivering for our customers, communities and the environment**
2.1.1	A successful Thames Water matters for our customers, communities and the environment
2.1.2	Our ageing assets, geography, geology and population characteristics increase cost of delivery and are not fully captured in Ofwat's allowances
2.1.3	Historical underfunding has meant that we have been repairing assets as required rather than replacing them, and this approach is not sustainable
2.1.4	Ofwat suggests that our customers have been forced to pay twice, which we reject
2.2	**We've set an ambitious plan to deliver for our customers, communities and the environment but bills will need to rise**
2.3	**To deliver our plan, while smoothing the recovery of the costs of investment over time to keep bills down, we need to raise significant new equity and debt**
2.4	**The draft determination provides a starting point that can be adapted to improve the financeability and investibility of our ambitious plan**
2.5	**To enable us to deliver our ambitious plan for customers and the environment, the draft determination requires re-calibration**
2.5.1	Ofwat's approach produces unrealistic overall stretch with efficiency and performance challenge, elevated risk, despite low returns on offer to investors
2.5.2	Our draft determination response includes three types of recommended changes: (i) best practice regulation improvements; (ii) adjusting for Thames-specific factors; and (iii) refinements to enable us to deliver our plan for our customers
2.5.3	By calibrating several specific areas, the final determination will support us to deliver for our customers, communities and the environment
2.5.4	Without these changes across the regulatory package, our plan will not be financeable and we will not be able to deliver for our customers, communities and the environment
2.6	**Ofwat has the opportunity now to make the changes we propose and better enable us to deliver our ambitions for customers, communities and the environment**
2.7	**TWUL Board assurance statement**

2.1 We are focused on delivering for our customers, communities and the environment

2.1.1 A successful Thames Water matters for our customers, communities and the environment

We are the largest water and wastewater company in England and Wales. Our purpose is to deliver life's essential service, so our customers, communities and the environment can thrive. We're proud to deliver 2.5 billion litres of safe drinking water to 10 million customers and treat 5.1 billion litres of wastewater for 16 million customers every single day.

In October 2023, we submitted an ambitious PR24 business plan proposal for 2025 to 2030. This is our most ambitious plan ever and is fully backed by our board. It sets out what we are doing to adapt our business for the future to improve our service.

Throughout the process, we've interacted extensively with Ofwat, our other regulators and the Government about the nature of our plans and the challenges we face. Following this engagement, and having listened to these stakeholders, we updated our plan in April 2024 to increase the proposed total expenditure (totex) to £19.8bn from £18.7bn, with the additional spending focused on projects that will benefit the environment.

We hoped that this process would help Ofwat issue a draft determination that would attract much-needed investment and deliver more for customers and the environment, using the regulatory tools available to them. While we welcome elements of the draft determination, as it stands it does not allow us to recover efficient costs, does not set realistic performance incentives, and consequently does not provide the basis of a market-led solution for the turnaround of our business. We consider that as it currently stands the draft determination does not meet key statutory objectives such as the consumer and resilience objectives, as well as the financing and growth duties, amongst others.

In this document, we set out the challenges our business faces over the next AMP and beyond, our ambition to deliver more – more resilience, more operational, environmental and customer performance – in the face of these challenges, and the re-calibration that is required to make our plans financeable and investible and therefore deliverable.

Our response throughout this document is underpinned by the following context:

- Our ageing assets, geography, geology and population, increase our cost of delivery, and are not fully captured in Ofwat's allowances. In addition, there are wider challenges in delivering for our customers, communities and the environment.
- Historical underfunding has meant that we have been repairing assets rather than replacing them, and this approach is not sustainable.
- Ofwat suggests that our customers are being asked to pay twice, which we reject.

We provide further information on these points here, supported by annexes to this document. This context underpins the fundamental need of the plans we have developed, and the basis of our assessment of Ofwat's PR24 draft determination. This provides evidence supporting the needs case for the funding and outcomes in our business plan and should be assessed by Ofwat and reflected in its final determination.

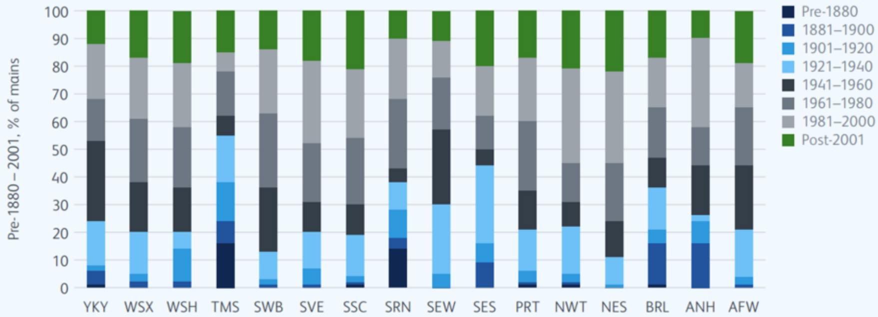
2.1.2 Our ageing assets, geography, geology and population characteristics increase cost of delivery and are not fully captured in Ofwat's allowances

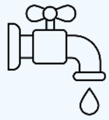
The combination of our specific characteristics and long-term challenges puts significant pressure on maintaining existing service levels, and increases the need for investment to repair, replace and enhance our infrastructure. Not taking these characteristics into account in the final determination will harm the resilience of our assets into the future, as it means we are not able to invest in the asset health gap resulting from past AMP decisions. Our PR24 final determination needs to recognise and provide sufficient funding to mitigate these population, climate and geological challenges. Annex A sets these challenges and characteristics in more detail, underpinned by third-party evidence. Additionally, we commissioned research from Mott MacDonald on the "Rationale for London Additional Expenditure Factors affecting performance and cost" (TMS-DD-116). That provides an extensive assessment of the evidence of thy serving London is more complex and expensive than on water regions. We summarise some of this on the following page.

Compared to the rest of the sector…

We have the oldest and most complex assets

- ▲ We have an average asset age of 79 years compared to the industry average of 56 years. We are the only company in the industry where almost 40% of our assets are over 100 years old.[1] *Pipe failures are strongly correlated with asset age.*





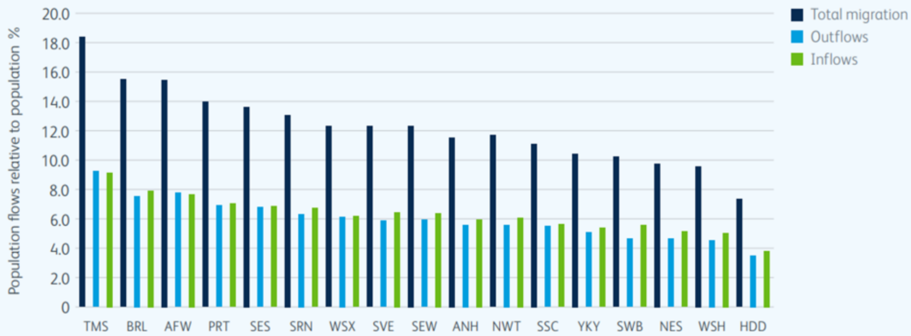
60% of our mains are made of cast iron. *Our geology of London Clay is susceptible to shrink-swell behaviour and is highly corrosive for iron pipes.*[1]

We have the highest population density

- We have 5,598 residents per km^2 compared to an average of 434 residents per km^2 in England, and 150 residents per km^2 in Wales.[2] *Our network is therefore under the most stress, with the highest hydraulic load and volume per length of main.*
- Population growth in London since privatisation (1981 to 2022) has been 30% compared to 19% in the UK.[2] *This means that more water will have to be supplied, more sewage treated, and more surface water run-off from construction. It also means higher network reinforcement costs to prevent low water pressure and sewer flooding, increased pollution and storm overflows*.

We have the highest migration rate

- We have an 18% migration rate compared to a 12% average across the rest of the UK.[1] *Transience has a statistically significant impact on retail costs and increases our exposure to bad debt.*



2,000 more Food Service Establishments per 10,000 km sewers than industry average.[3] *Major source of fat, oil and grease*

We have a high proportion of basement properties

- Over 17% of properties have a basement. Only South and West Yorkshire have a proportion greater than 5%.[1] *We must expend greater effort to protect these properties from flooding.*

We have experienced the greatest number of hottest days

- ▲ Changing climate conditions are already having a significant impact on the resilience of our operations. The number of 'hot' days (28°C) has more than doubled and 'very hot' days (30°C) more than trebled for the most recent decade compared to the previous 30 years.[4] The South East has experienced the largest number of these hot days.

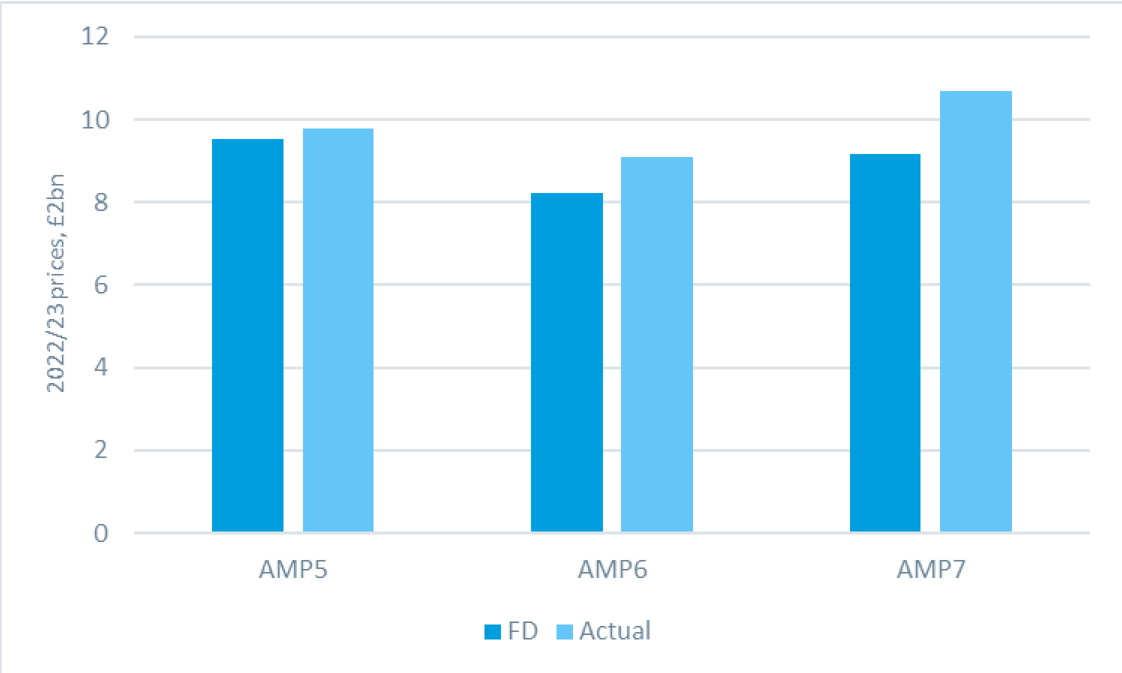
Without further action, there is a 1 in 4 chance over the next 30 years that large number of households will have their water supply cut off for an extended period because of severe drought.[5]

Sources:
1 Economic Insight, cited in our PR24 October Business Plan
2 ONS Population and Household Estimates, based on Census 2021
3 See TMS-DD-037 - Cost efficiency
4 Met Office UK Climate Projections 2023
5 National Infrastructure Commission, Preparing for a drier future

2.1.3 Historical underfunding has meant that we have been repairing assets as required rather than replacing them, and this approach is not sustainable

Between AMP1 and AMP3, marginal efficiency gains were significantly higher than they are now. As such, we underspent our allowances. Between AMP5 and AMP7, we forecast we will have overspent by £2.7bn, including by £1.6bn in AMP7 (in 22/23 prices). Some elements of this overspend may be attributable to inefficiency, but the recurrent nature of the overspend points to a more fundamental flaw in Ofwat's approach to setting allowances. The fact of the matter is that, notwithstanding having every incentive to do what it could to reduce them, Thames Water has faced the costs it faced. With funding that has been insufficient to cover costs, we took on more debt, rising from approximately 72% in 2009/10[1] to 80.6% in 2023/24[2], and have been unable to invest enough in our assets, with an impact on performance and resilience.

Figure 1: Historical allowance and expenditure, AMP5 to AMP7, final determination vs Actual



Since 2012, we have spent a larger share of base expenditure on capital maintenance than the industry average for both water (51%, compared to an industry average of 40%) and wastewater (44% compared to an industry average of 42%). The notably higher share in water can be linked to our demonstrably better performance on the water side of the business. This shows how capital maintenance spending is beneficial to our customers. In the first three years of AMP7, we have invested 38% more per property in wholesale water than the rest of the sector on average, on a totex basis. Our spending on capital maintenance as a proportion of base expenditure for both water and wastewater has been broadly consistent over the past 10 years.[3]

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[1] Moody's Investors Service (25 April 2024). *Credit Opinion Thames Water Utilities Ltd.* Available here.
[2] Thames Water (2024). *Annual Report 2023/24.* Available here.
[3] Economic Regulation, cited in Thames Water (2023). *PR24 Our Business Plan.* Page 140. Available here

Despite this investment, our assets are not resilient. It is not sustainable to continue with replacement and renewal approaches that see asset lives extend far beyond expected obsolescence, particularly given that the cost of managing our ageing assets and dealing with failures is increasing, and the impact of climate change and population growth is putting more pressure on our already stretched asset base.

At the current rate of investment, it will take 185 years to renew our network.[4] But asset health will continue to deteriorate further unless there is an increased level of replacement activity. Our analysis indicates that 2,800km of distribution mains network is nearing the end of its expected life at AMP7, and that this is deteriorating at a rate of nearly 750km every 5 years.[5] We can and will manage the risk around these mains, where we are not in a position to replace them. But a long term programme to increase asset replacement and improve resilience is needed, along with certainty over funding for this, so, as an industry, we can engage with our supply chain and other key enabling parties (such as local authorities) to deliver it.

We – and other key industry representatives – are now requesting a step change in base expenditure in AMP8 to address the costs associated with managing our ageing assets, and to begin to address our asset heath challenges through maintenance and replacement work. Thames Water's funding needs to be higher than the sector average because we have the oldest assets in the sector and a unique geography.

- Water UK have stated that "the available evidence suggests that there is a need for a step-change in the level of asset maintenance and replacement at PR24 (and beyond) to ensure it is on a long-term sustainable path. In turn, this requires a step-change in the level of funding available for this through future price controls."[6]
- Sir James Bevan, the previous Chief Executive Officer of the Environment Agency, has highlighted that we are at an important moment for encouraging a step-change in infrastructure renewal to address climate and growth challenges.[7]
- The Environmental Audit Committee has noted that "a step change in regulatory action [and] water company investment… is urgently required.[8]

2.1.4 Ofwat suggests that our customers have been forced to pay twice, which we reject

Ofwat has made the assertion that "customers will not pay twice" for costs where expenditure is insufficiently justified, inefficient or for activity for which companies have already been funded.[9] For us specifically, we understand that Ofwat is referring to the following areas:

A. We submitted an enhancement claim for additional funding to deliver outstanding AMP7 WINEP obligations. Ofwat state that "The company did not differentiate between actions

[4] Thames Water analysis of cost assessment dataset
[5] See Thames Water PR24 business plan, TMS15 – Asset Health. Available here.
[6] Economic Insight (2022). *Options for a Sustainable Approach to Asset Maintenance and Replacement. A Report for Water UK.* Available here.
[7] House of Commons Environmental Audit Committee (2022). *Water quality in rivers. Fourth Report of Session 2021-22.* Available here.
[8] Ibid
[9] Ofwat (2024). *Ofwat sets out record £88 billion upgrade to deliver cleaner rivers and seas, and better service for customers.* Available here.

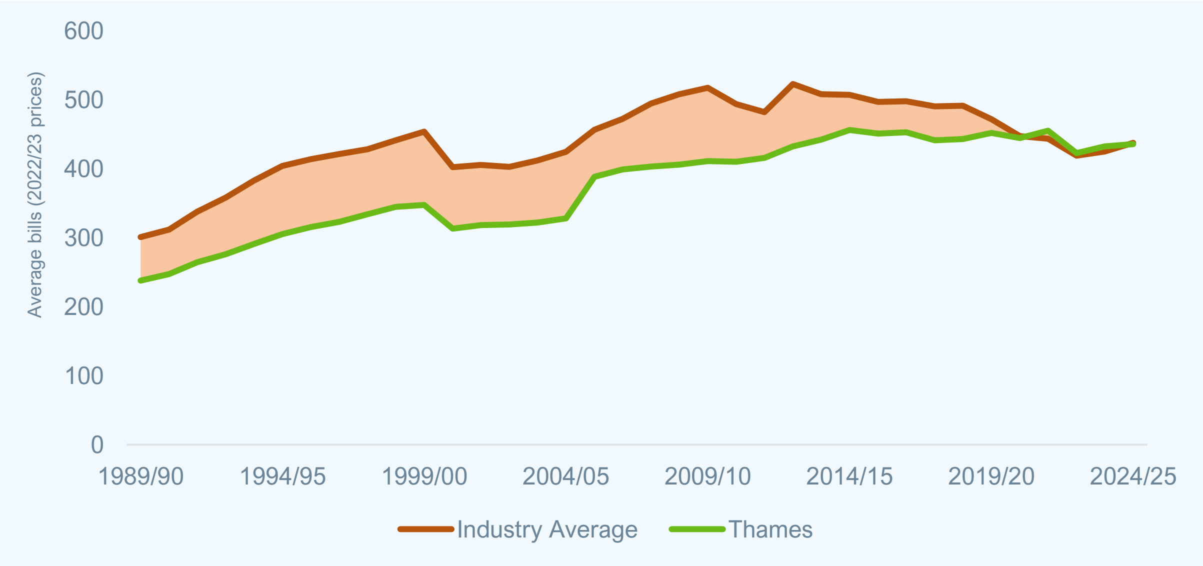
that were already funded and those that were underfunded under the PR19 uncertainty mechanism". Ofwat has only provided allowances for the 59 carryover actions which were due to be completed by 2030.[10]

B. We proposed £677m of expenditure for our Wastewater Asset Assurance Programme (WAAP), to address the risk that our assets at 157 wastewater sites operate beyond flow permit conditions. Ofwat has stated that: "These are costs that Thames Water has avoided incurring in the past by failing to address issues at its WWTW [wastewater treatment works] in a timely manner."[11]

C. We proposed £1.9bn of expenditure over and above our existing capital maintenance replacement programme, to begin to address the challenges caused by our aging assets by undertaking the required step-change maintenance and replacement. Of this, £677m is covered in point B above. Ofwat considered that some of the funding requested is "either already provided for in [our] day-to-day allowance or will have been funded in previous price reviews."[12]

As outlined above, funding has historically been insufficient to cover costs. Consistent with this, our bills have been historically below and more recently around the sector average. Since privatisation, our bills have averaged 15% below the sector average, equivalent to a £12bn gap in real revenues. We have not paid any external dividends for the last 7 years, and our PR24 business plan commits no external dividends before 2030.

Figure 2: Average dual water bills since privatisation



We are not asking customers to pay twice, and contend that Ofwat's statements are an assertion, rather than fact, and without evidence. Our customers are paying once for essential expenditure, which was underestimated in previous price reviews. For the avoidance of doubt, there has not been the situation of allowances which we have not spent and are now asking for again. Ofwat's public messaging of "customers paying twice" is a dangerous soundbite; it has resonance but is unevidenced and unhelpful.

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[10] Ofwat (2024). *PR24 draft determinations. Accounting for past delivery.* Available here.
[11] Ofwat (2024). *Notice of Ofwat's proposal to issue an enforcement order and impose a financial penalty on Thames Water.* Available here.
[12] Ofwat (2024). *Overview of Thames Water's PR24 draft determination.* Available here.

Instead, and against each of the aforementioned areas, we are asking for:

A. Sufficient funding that should have been provided in AMP7 for us to complete delivery against all AMP7 WINEP obligations.

B. Increased funding to £1bn for our WAAP reflecting the better understanding we have of the costs of delivering work at these 157 wastewater sites as we continue to take site solutions through the planning and design process.

C. To respond to the critical need to improve asset resilience and to deliver environmental improvements into the future.

Only through obtaining this funding will we be able to move forward and deliver for our customers in each of these three areas. For the last three AMPs, we have tried to maintain and operate our network within the parameters of very challenging final determinations. We cannot afford to continue this trend and we cannot accept Ofwat's rejection of funding in these areas.

First, we are no longer able to make up the difference through external financing. Based on the feedback provided by Ofwat to date, the first £500 million of the new equity that had been anticipated for AMP7 was not provided by our shareholders by 31 March 2024 as previously expected. In any event, achieving Ofwat's desired gearing level of 70% would require us to replace long-term debt with equity through a de-gearing process, rather than putting the equity injection to use to deliver our plan.

Second, if it was ever appropriate, we cannot now curtail investment to facilitate a gap in funding. As outlined in Section 2.1.2 our assets are no longer capable of reliably performing their function or have already passed the defined risk threshold, and this position is impacting both our performance and resilience.

And third, even if our assets were not in their current condition, we would still be looking to invest more into them to meet the strategic long-term challenges (as outlined in Section 2.1.2) to our infrastructure. A major gap in the funding we require going into AMP8 will therefore have an impact on the performance and resilience of the services we provide into the future. This is not acceptable for our customers, communities or for the environment.

2.2 We've set an ambitious plan to deliver for our customers, communities and the environment but bills will need to rise

The plan we submitted to Ofwat on 2 October 2024 was for £18.7bn totex. In April 2024, with further clarity from discussions between the industry, Defra, EA and Ofwat on the statutory programme for AMP8, we were able to update our plan to include an additional £1.1bn totex in our core plan and a further £1.9bn totex on statutory schemes that we could unlock as we develop the capacity to deliver them and provide assurance to Ofwat on efficient cost. This brought our April business plan to a total of £21.7bn totex.

Updated business plan for total expenditure

We have continued to develop our understanding of what we need to do and the costs of doing it. Some of these changes reflect further work we have done internally; some changes reflect new requirements that have been placed on us. This has led us to make a number of changes to our plan, taking our AMP8 totex from the £21.7bn in our April plan to £23.7bn, including £3.0bn of expenditure linked to gated processes and the delivery mechanism.

A summary of our overall business plan needs, taking into account our latest information and requirements, grounded in delivering the turnaround plan our customers need, is set out in the table below.

Table 1: Overview of our draft determination response totex position

£bn, 22/23 prices	April PR24 updated submission	PR24 DD response
Base	12.1	13.3
Enhancement	7.5	7.4
Pension Deficit recovery	0.2	-
Core Plan	**19.8**	**20.7**
Large-gated schemes	-	1.3
Delivery Mechanism	1.9	1.7
Full Plan	**21.7**	**23.7**

Updated Botex view

Our updated forecast of the ongoing cost running of our business, given the increased expectations from Ofwat on base expenditure and taking into account our latest run rates through the later period of AMP7, has increased from £12.1bn to £13.3bn. This is driven by:

- An increase of c.£0.9bn to our capital maintenance having reviewed our run rates through the last two years of AMP7, recognising the true run rate to achieve consistent performance.
- An additional c.£0.1bn additional investment as part of delivering 553km of mains renewal.
- An additional c.£0.1bn in retail, predominantly relating to bad debt.

This investment is required to give us the best chance of delivering against our ambitious and stretching PCLs, as set out in Section 5 of this document and annex TMS-DD-039.

Updated Enhancement Case view

We summarise our latest consideration for Enhancement Costs expenditure in our annex on enhancement costs (TMS-DD-038), and in section 3 of this document.

We have **reduced** our Business Plan request for funding in the following areas:

- Wastewater WINEP: continuous water quality monitoring. We accept the lower unit cost proposed by Ofwat. This decision has been informed by the latest available market data and our early work with the supply chain in planning for the delivery of this programme. This reduces the funding requested from £89.1m to £51.7m.
- Wastewater WINEP: storm overflows investigations. Since we submitted our business plan, the Environment Agency (EA) issued new guidance on investigations. In light of this regulatory change, and in consultation with the EA, we reduced the scope of the programme. This reduces the funding requested from £74.9m to £22.3m.

We have also identified areas of additional enhancement scope requiring an **increase** in funding requested. These areas are:

- WINEP storm overflows programme scope change to include works at Benson STW, requiring £31.5m additional funding;
- Additional water and wastewater resilience projects: £69m additional funding needed (arising from Ofwat's draft determination cost modelling and request);
- We have amended the scope of our metering enhancement programme, resulting in a change in allowance requested from £257m to £287m. The metering programme set out in our April business plan submission assumed delivery of the Green Economic Recovery (GER) metering programme in AMP7. Following Ofwat's decision not to amend the funding conditions for the GER scheme, we have re-structured the metering programme in AMP8.
- The forecast cost of completing the AMP7 London Water Improvement Conditional Allowance in AMP8 has increased from £26m to £76m.
- £140m allowance has been included to reduce leakage in line with Ofwat's performance commitment proposed as part of draft determinations.

We have provided additional evidence to address Ofwat's deep dive comments on the case-by - case basis in our annex on enhancement costs (TMS-DD-038). This includes detailed Option Development Reports demonstrating our robust optioneering processes, as well as third-party cost assurance. ARUP's findings can be found in their report TMS-DD-115.

Updated gated allowance view

Between 2025 and 2030, we will deliver more than we have ever done before. Our core plan includes a proposed £20.7bn of investment, with a further £3bn in large gated schemes and the delivery mechanism. This additional £3bn would only be delivered upon meeting the criteria set out in section 4. Costs related to gated allowances in our plan include:

- An additional £200m for Beckton sludge powered generator, which we are proposing goes through the large gated scheme process.
- An additional £500m related to the SRO project, of which £300m relates to land purchases, approach agreed with Rapid.

Updated bill impact view

Delivering the sustainable improvements our customers and stakeholders expect will necessitate a significant increase in average bills. As illustrated in Figure 3 below, we are projecting average annual bill increases of 52% by 2030, and by 38% in the first year of AMP8.

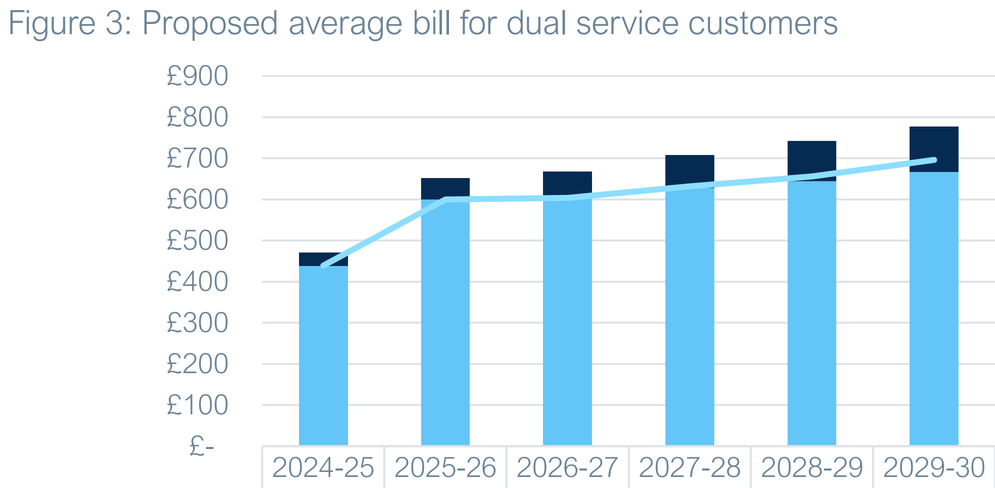
If we were to unlock the full allowances for the large gated schemes and the delivery mechanism, then we project average bill increases of 59% by the end of AMP8.

On average, our bill will represent 2.4% of household expenditure by 2030. However, we know that 38% of our customers struggle to pay their bill, and that this proportion has risen over time.[13] Our region is the most unequal in the UK. Over the last two decades, London has the highest poverty rate in the UK, with 25% of households in poverty.[14] As part of our business plan and

[13] Thames Water (2023). *Vulnerability 'deep dive' research report.* Available here.
[14] JRF (2024). *UK Poverty 2024.* Available here.

subsequent , we have outlined how we will step-up our support for customers who struggle to pay their bills, as summarised in Annex B.

Figure 3 : Proposed average bill profile for dual service customers



	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Dual service bill interest, with no gated spend	£32	£52	£65	£80	£98	£111
Dual service bill in 22/23 prices with no gated spend	£439	£600	£603	£628	£644	£667
Dual service bill in 22/23 prices with gated spend	£439	£600	£604	£632	£656	£696

2.3 To deliver our plan, while smoothing the recovery of the costs of investment over time to keep bills down, we need to raise significant new equity and debt

We are confident we can turn our business around and improve operational performance and environmental outcomes, given the time and funding to do so.

At a sector level, the draft determination would result in a substantial increase in total expenditure from £59bn over the period 2020-25 to £88bn over the period 2025-30. Much of this increase is due to £35bn of investment in AMP8 to improve and protect our water and wastewater systems (which represents an increase from £11bn at PR19). A jump of this magnitude can't be met by reinvesting any surplus cashflows we may have and will require raising new equity and debt finance. Company PR24 business plans suggest £7bn of external equity finance will need to be raised by the industry by 2030 to invest in improving services[15]. It is likely that significantly more than this will be required to meet any concurrent requirements from Ofwat for deleveraging.

We require c.£3.3bn of new external equity, as well as substantial new debt, to finance and therefore enable the scale of improvement our customers are seeking in AMP8. This is significantly more than Ofwat's draft determination (for our notional business). The ability to attract this finance will mean that we can spend money to deliver improvements today while spreading the cost to our customers over many years, in line with the period over which customers will receive the benefits from the investment.

[15] Ofwat (2024). *Our draft determinations for the 2024 price review – sector summary.* Available here

This significant fresh equity issuance is a marked change from previous price reviews where minimal equity issuance was both assumed and invested. It reflects the massive increase in the investment programme in the coming control period compared to previous periods. This requires a pivot in regulatory approach – equity investibility becomes far more important. Debt financeability remains important to attract low-cost debt financing, as debt remains the largest portion of the notional capital structure and will be critical to finance investment and RCV growth. The cost of debt (and ultimately its availability) also depends on the availability of equity, given that the equity buffer essentially provides a protection for debt investors. The twin requirements of investibility and financeability are reinforcing – strong investibility supports equity finance raising, which in turn improves financeability and debt finance raising.

Thames Water, and the sector more widely, is competing for both debt and equity in a highly competitive financing market, as energy networks, energy infrastructure, transport and other net zero infrastructure developers ramp up investment during a similar timeframe. The National Infrastructure Commission analysis for the Second National Infrastructure Assessment indicates that overall UK investment in infrastructure needs to increase from an average of around £55bn per year over the last decade to around £70 to 80bn per year in the 2030s.[16] Given this unprecedented level of new financing required, the PR24 final determination must offer an opportunity to earn returns that are commensurate with the returns that can be earned investments of a similar riskiness elsewhere.

We are seeking fresh equity investment. Our investors are likely to take a long-term view of the investment proposition (often aligned to the maturity of their liabilities). This means the long-term direction of the company, its long-term growth prospects and its ability to outperform are all relevant considerations. However, the outlook for AMP8 is also important to long-term investors. From an investor perspective, AMP8 needs to be a successful stepping stone on the path to a high-performing future, as well as providing some acceptable base level of yield. Investments which provide zero yield in the short-term require a very different long-term return profile, which the water sector can't offer.

2.4 The draft determination provides a starting point that can be adapted to provide an investible plan

There is much of the development of the PR24 framework, as implemented in the draft determinations that we support. These regulatory evolutions will help to provide more certainty for the sector and produce a more appropriate balance of risk and return. Notwithstanding our concerns about how some of these elements have been calibrated, which we set out below, we do welcome a number of these evolutions:

- A step change in allowances for investment. After a sequence of price reviews which have excessively focussed on restraining customer bills, and thereby heavily constraining investment, this has resulted in a water sector which is not delivering the performance customers expect, nor the resilience needed. The overall increase in totex allowances for PR24 is a welcome shift and will help the sector improve service levels and build resilience. Ultimately, if we are able to do more in line with the expectations of customers and stakeholders, we have a chance of rebuilding trust over time.

[16] National Infrastructure Commission (2023). *National Infrastructure Assessment.* Available here.

- The reduction in cost-sharing rates for higher risk and more uncertain projects reflects a more efficient allocation of risk in line with the principle that risk is best allocated to those who can manage it, because this incentivises efficiency.
- The principle of 'aiming' up in the cost of equity range reflects the need to raise a significant amount of equity finance, which would not be possible using the mid-point of CAPM cost of equity estimates.
- The acceptance of the case for various enhancement schemes, including £117m allowed (across 2025-30) for a scheme where water would be abstracted near Teddington and transferred to East London, via an existing tunnel, and £297m allowed (across 2025-30) to support development of the South East strategic reservoir, River Severn-River Thames interconnector, and building a new abstraction point on the lower River Thames. Customers will start to see the benefit of this funding from early in AMP8, and many years to come.
- Conceptually, we welcome access to funding for large schemes through a new gated process to unlock customer funding at the appropriate point in scheme development, which would enable us to undertake optioneering and cost benchmarking and therefore would enable Ofwat to have greater confidence about the efficiency of the costs we seek to recover.
- We also welcome the creation of the delivery mechanism to allow us to unlock funding for delivery of statutory schemes when we have line of sight on how they will be delivered. The design of this mechanism is helpful as it enables cost to be recovered through allowed revenues when costs will be incurred, and so does not create additional financeability requirements.

However, the calibration of the PR24 draft determination falls short of funding necessary activities and produces a risk profile which is heavily skewed to the downside.

2.5 To enable us to deliver our ambitious plan for customers and the environment, the draft determination requires re-calibration

2.5.1 Ofwat's approach produces unrealistic overall stretch with efficiency and performance challenge, elevated risk, despite low returns on offer to investors

Ofwat's regulatory approach has placed significant strain on water companies, exacerbated by the stringent demands of PR19 across various key areas. The regime has been widely considered overly tough, and as a result Ofwat have recognised that "in many areas progress is not being made at the pace required to meet the performance commitment levels."[17] The majority of water companies are currently experiencing ODI net penalties. Whilst Ofwat has introduced some evolutions in its PR24 price review (see above), these changes have not fully addressed the fundamental challenges faced by the industry.

The excessive regulatory challenge on companies persists, with increasing costs and delivery challenges, compounded with elevated levels of downside exposure through larger ODIs and the introduction of an extensive suite of PCDs. Moody's have recognised that "Based on the draft determination and if companies perform in line with their business plan assumptions, we estimate that most companies are likely to incur net penalties over the next five years, in

[17] Ofwat (2023). *Water company performance report 2022-23.* Available here.

aggregate amounting to around £2bn across the sector."[18] This includes overly stretching PCLs, almost all of which are unachievable for us, with the exception of a few such as customer contacts, unplanned outage and sewer collapses. In a note to investors, Barclays Research recently said: "We believe the ODI challenge is extremely tough, and we reflect this in our achieved ROREs."[19]

Added to this is the financeability challenge that comes from Ofwat's use of aggressively low core allowances where it has introduced end of AMP true-ups for real price effects, and delays between expenditure and cost recovery in some of the gated processes. This picture in the round is not compensated for in Ofwat's WACC which is calculated using a series of variables most of for which Ofwat chose low estimates. Taken together, this will make it extremely challenging, if not impossible, for companies to deliver what regulators expect within the allowances that Ofwat has determined, and will make it challenging to secure the finance – equity and debt - that they need for the investment programme.

At a sector level, the PR24 final determination needs to work as a package in the round. Financial and operational incentive parameters must be balanced and offer incentives for stretch while being achievable. If parameters are overly stretched across all areas, against a backdrop of significant reductions in allowances compared to company plans, the sector will be unable to deliver the levels of performance and resilience in respect of services that is expected and financial resilience will also suffer as companies seek to finance funding gaps and find it hard to attract equity. This deteriorating position risks tipping into a downward spiral, from which recovery will be challenging with further negative impacts on present and future customers and environment. It will also risk the sector's ability to support economic growth.

2.5.2 Our draft determination response includes three types of recommended changes: (i) best practice regulation improvements; (ii) adjusting for Thames-specific factors; and (iii) refinements to enable us to deliver our plan for our customers

Our response intentionally incorporates three types of proposed adjustments to our draft determination. The first, covering the majority of our representations, includes suggested technical adjustments to price control parameters where we are supplying Ofwat with updated, or refined data and analysis and/or addressing concerns raised by Ofwat in the draft determination. By taking account of these changes and the evidence provided in support of them, Ofwat will be able to produce final determinations which are technically more robust, and with allowances and targets which are more aligned to what we and the wider sector should be stretched to achieve.

The second type of representation involves adjusting cost allowances and performance levels for factors which are distinct for us. Ofwat's price control methodology allows for these differences, through incorporating cost adjustment claims, and/or company-specific PCLs. In previous price controls, Ofwat has aligned too closely to cross-industry models and common outcomes targets which don't fully take account of company and regional differences which are outside of their control. These risk setting targets with excessive stretch or allowing insufficient funding allowances. Moving forward Ofwat needs to set our final determination to deliver the services required by our customers based on the distinct features of our region and customer

[18] Moody's Ratings (14 August 2024). *Ofwat's draft determination increases sector risk.*
[19] Barclays (5 August 2024) *Breaking the water cycle – no longer so positive.*

base. These proposed adjustments are enduring, as our inherent population and hydrological characteristics only change slowly.

Our last type of representation relates to proposed changes to our draft determination on account of the current financial and regulatory position of the company. We acknowledge that the oversight regime and Independent Monitor are not business-as-usual and we are striving to turnaround our business performance. Alongside these regulatory arrangements, we consider there are additional temporary adjustments to the price review framework which will assist us to push forward with the delivery of our plan to the benefit of our customers. These proposals are Thames-specific (but could also apply to other companies in similar situations). They would fall away once we successfully exit the oversight regime.

2.5.3 By calibrating several specific areas, the final determination will support us to deliver for our customers, communities and the environment

Our business plan is hugely ambitious, but it is also realistic about the time, resources and supply chain capacity that is needed over the next 5 years to provide a platform for sustained improvement over the long-term. There are pragmatic amendments, which represent a recalibration of the PR24 draft determination, that will enable us to deliver this plan.

Table 2: Summary of Thames Water response

1	**BASE ALLOWANCE** | **Response Summary:** Sections 3.1 | **Underpinning Evidence:** TMS-DD-037 • The extent to which our base expenditure proposals have been disallowed in Ofwat's draft determination leaves us with allowances that are insufficient for the ongoing provision of services for our customers, communities and the environment. • Ofwat's modelling approach assumes homogeneity among companies and fails to consider our specific circumstances, including substantially higher costs of operating in London, population transience, and input costs than the rest of the sector. • *We have identified alternative modelling and benchmark approaches for wholesale water and wastewater, retail, bioresources and unmodelled base costs. Ofwat should consider these approaches to determine a more appropriate cost allowance for our business*.
2	**ENHANCEMENT COSTS** | **Response Summary:** Section 3.2 | **Underpinning Evidence:** TMS-DD-038 • The extent to which Ofwat has disallowed enhancement costs in our draft determination threatens our ability to deliver on statutory obligations, and – as we seek to prioritise compliance delivery in the face of under-funding - will create additional risk to performance and resilience across our assets and activities. • For example, the proposed reductions to our wastewater schemes will put at risk our investment programme to deliver our statutory obligations and sets back our strategy to improve the security of water supply. Given the increased national attention on addressing pollution challenges and our specific issues which are well publicised, we are concerned that Ofwat's cut to our allowances will prevent us from delivering the necessary changes.

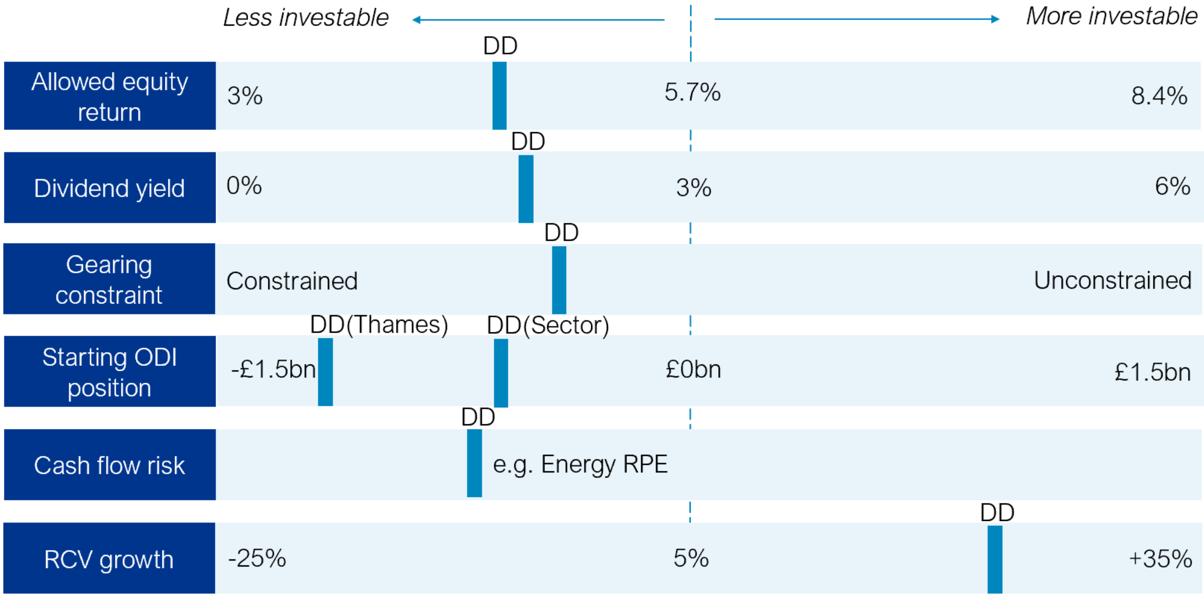
	• The modelling approach that Ofwat has taken to benchmark enhancement costs is too simplistic to bear the weight of the challenge that it had produced, given lack of data, poor model specification and insufficient capture of regional differences. • *We have provided additional evidence which Ofwat should consider to determine a more appropriate enhancement case allowance for our business, focusing on demonstrating optioneering and cost efficiency.*
3	**BASE AND ENHANCEMENT COST ALLOCATION** | **Response Summary:** Section 3.3 | **Underpinning Evidence:** TMS-DD-037 and TMS-DD-038 • Ofwat has wrongly scoped 'what base buys' and assumed much of our request for enhancement funding to be already covered under base allowances. • We, and the wider sector, have concerns that asset health and capital maintenance are inadequately provided for in Ofwat's cost models, with needs that are highly specific to the portfolio of assets a company has. *We propose an additional allowance for critical asset health activity to prevent further accumulation of resilience risk to the detriment of* customers *and the environment.* • Ofwat applies an excessively stretching upper quartile efficiency benchmark where comparative modelling approaches lack robustness. *Instead, Ofwat must set a challenging and yet achievable efficiency target.* • Ofwat's RPE forecasts are significantly different from market evidence. We reject Ofwat's frontier shift assumption as this is not aligned with UK productivity performance, whilst its approach to catch up efficiency is excessive where modelling and data are weak. *We ask Ofwat to come to a more balanced conclusion which accounts for all available evidence.*
4	**DELIVERABILITY AND MONITORING** | **Response Summary:** Section 4 | **Underpinning Evidence:** TMS-DD-045 and TMS-DD-041 • We support the inclusion of the delivery mechanism. *We have provided an updated view of the programmes and costs that it should address, and amendments to ensure funding is released proximate to when expenditure is incurred.* • The gated asset improvement allowance provides a way forward to enable and de-risk investment in key areas, but if applied rigidly will create a burden that limits our ability to deliver critical investment and will slow down delivery. • The approach to PCDs introduces unnecessary downside risk that will impact the ability to finance our plan. *We set out several specific suggestions to limit this risk.*
5	**OUTCOMES** | **Response Summary:** Section 5 | **Underpinning Evidence:** TMS-DD-039 • Ofwat's approach for PCLs does not recognise actual sector performance, which demonstrates how challenging PR19 PCLs were. *Median PCLs should be recalculated based on actual AMP7 outturn performance to create stretching yet credible targets.* • As it stands, we would expect to incur a £1.6bn ODI penalty and face a maximum MeXes penalty in excess of £400m across AMP8, significantly undermining our ability to deliver our ambitious plan for the benefit of our customers and the environment. *We propose a revised outcomes package which is more appropriately balanced.*

	• The financial exposure in the draft determination outcomes package for wastewater is unduly high with Ofwat's proposed 300bps RoRE cap being too wide to provide effective mitigation. *We make specific representations for PCLs and caps and collars where we consider Ofwat's challenge to be unrealistic, undeliverable and/or not in the interests of our customers, communities and environment.*
6	**ALLOWED RETURN** | **Response Summary:** Section 6.1 | **Underpinning Evidence:** TMS-DD-040 • The return on equity in Ofwat's draft determination does not provide sufficient reward for the risk that shareholders take on as the owner of a water and wastewater company. Ofwat's cost of debt estimate further risks penalising companies with large investment programmes. • Ofwat need to recognise more explicitly that market conditions have changed in the last 2-3 years, leading to higher interest rates and returns across global markets. *Ofwat needs to approach each component of the calculation in a more balanced way, by considering all available information.* • *We propose several technical improvements to the allowed return calculation that is based explicitly on our testing of financeability, investibility and financial resilience, to better reflect real-world financing costs.*
7	**RISK AND RETURN** | **Response Summary:** Section 6.2 to 6.5 | **Underpinning Evidence:** TMS-DD-041 • Redistributing funds to de-gear in parallel to restricting dividend yields presents significant downside risk and disincentivises investors. If we fail to attract investors, the detrimental impact on customers and the environment will be significant. • Our assessment of RoRE shows the risk inherent in our draft determination is excessive. *To bring an acceptable balance to risk and return, we propose changes at both an industry level and in our specific price control arrangements. We propose a Turnaround Oversight Regime Aggregate Sharing Mechanism to manage risk and support turnaround, providing investibility.* • Ofwat's draft determination is not financeable on a notional basis. The plan put forward in this response would require c.£3.3bn in new equity to stabilise credit metrics.

2.5.4 Without these changes across the regulatory package, our plan will not be financeable and we will not be able to deliver for our customers, communities and the environment

Ofwat has consistently taken positions which are detrimental to investibility. Any one of these decisions may not be sufficient to deter investors, provided the investment case can be made elsewhere, but collectively having too many decisions which are detrimental to investibility ultimately will restrict the sector, or individual companies to finance their activities. We are exposed to a significantly disproportionate level of risk compared to the sector median company, most notably for totex, C-MeX and ODIs. Figure 4 below shows how Ofwat has made decisions on key parameters which make the sector less investible.

Figure 4: Levers of investibility



We commissioned KPMG to produce an analysis of our expected returns under the draft determination. The analysis identifies an expected under-performance against our allowed return on equity of around 775 basis points of RoRE and an 80% confidence interval running from 980 to 560 basis points of potential loss of return.

2.6 Taken together, this will help us to deliver an ambitious, achievable and realistic outcome for our customers, communities and the environment

Despite the challenges in our recent operations, a turnaround of Thames Water is achievable with stable leadership, consistent priorities, time and resources. We and the wider sector more broadly require a huge step-up in funding to reverse years of underinvestment, and to address climate change and population growth.

We remain of the view that a market-led solution would lead to a better and more cost-effective outcome for our customers, communities and the environment; however, it will require us working together with our regulators and the Government to create space to deliver our turnaround and ensure that investors are incentivised to continue investing in UK water.

Ofwat's final determination is therefore a critical enabler of our success. Through this process, we have set out the nature of our plans and the challenges we face to help Ofwat issue a final determination that will attract much-needed investment and deliver more, faster for customers and the environment, using the regulatory tools available to them. This in turn would fulfil Ofwat's statutory duties, ensuring growth for the sector at a time when it is much needed, and promoting resilience (both financial and operational) as well as a financeable company while furthering the consumer objective.

2.7 TWUL Board Assurance Statement

We have designed and implemented a robust, risk-based governance and assurance process over our draft determination response, which is owned and overseen by the Board. Annex C to this document summarises the assurance we have undertaken across our response.

The draft determination response has been created against a backdrop of rising public and regulatory expectations and an increasingly challenging environment. We have listened carefully to Ofwat's feedback in preparing our response, and identify solutions to address the areas where we have significant concerns about the workability of the draft determination. We have continued to focus on what matters most to our customers and the environment in our proposals, balancing significant upward pressures on investment with customer affordability, deliverability, financeability and financial resilience. Our response reflects our best plan, recognising that we are continuing to work on a sustained and sustainable turnaround of the company, and will continue to do so in dialogue with our regulators.

We (the Board of Thames Water Utilities Limited) fully support the draft determination response, are satisfied that it reflects Thames Water's best plan at the point of submission and we are fully committed to delivering it. We note that to do so will require not only leadership and the energy and commitment of teams across the business, but also a conducive regulatory settlement. We support Thames Water's response based on the assumptions that have been made in producing it.

Deliverability

We fully support the delivery action plan Thames Water has submitted to Ofwat and the proposals in our draft determination response, which map out the pathway to our detailed deliverability and delivery plans for AMP8.

We continue to include in our plans the maximum scope that we consider is both deliverable and financeable within an efficient and affordable totex proposal based on our best current assumptions and will continue making improvements with a view to satisfying our statutory and licence obligations. We fully support Thames Water's draft determination response, which sets out necessary changes to the draft determination that will better enable us to deliver our ambitious plan for customers and the environment.

We agree that our delivery action planning and the execution of the plan will be monitored by Ofwat. This will happen as we build the delivery action plan into our business plan, reporting and monitoring arrangements for the development and implementation of which are included as part of the Undertakings in Lieu we have agreed with Ofwat to remedy the breach of condition P26 of our licence (the requirement to hold two investment grade credit ratings). This also includes appointment of a monitor by Ofwat and working to Ofwat's mandate, paid for by Thames Water.

Financial resilience

We fully support Thames Water's draft determination response. Our plan is financeable based on the cost of capital and other financing assumptions used by Thames Water.

Thames Water has agreed Undertakings in Lieu with Ofwat to remedy the breach of condition P26 of our licence (the requirement to hold two investment grade credit ratings). We are fully committed to delivering these Undertakings and to the work that will be needed to improve our financial resilience. This work will be monitored by Ofwat. The Undertakings we have agreed with Ofwat include appointment of a monitor by Ofwat and working to Ofwat's mandate, paid for by Thames Water.

3. Draft determination response on totex

3.1	**Base costs**
3.1.1	Our base cost allowance is insufficient for the ongoing provision of services to our customers, communities and the environment
3.1.2	Our higher operating costs are not sufficiently recognised through Ofwat's modelling
3.1.3	We have identified alternative modelling and benchmark approaches that Ofwat should consider to determine a more appropriate cost allowance for our business
3.1.4	Cost adjustment claims are crucial for us to recover a higher cost allowance to compensate for company-specific factors which are not captured in Ofwat's cost models.
3.1.5	Collectively, these modelling adjustments will ensure that our base cost allowance represents a reasonable and efficient challenge
3.2	**Enhancement costs**
3.2.1	Ofwat's assessment of our enhancement cases means we will be unable to deliver the improvements needed for our customers, communities and the environment
3.2.2	Ofwat's approach to benchmarking enhancement costs is not consistently robust due to shortcomings in data availability and model specification
3.2.3	We have further refined our business plan since the April submission to reflect the latest available information and to address raised by Ofwat in the draft determinations.
3.2.4	We have refined our Strategic Resource Options costs and present an alternative approach to allocating expenditure across "baseline" and "contingent" allowances.
3.3	**Allocation between base and enhancement costs**
3.3.1	Ofwat has wrongly calibrated its assumptions about 'what base buys' and assumes much of our request for enhancement funding to be already covered under the base allowances
3.3.2	Inadequate allowance for capital maintenance expenditure
3.4	**Other key assumptions in determining cost allowances**
3.4.1	Ofwat catch-up efficiency benchmarks should not provide an unrealistic target
3.4.2	RPEs and the indexation of energy, labour and material costs
3.4.3	Frontier shift is not aligned with UK productivity performance
3.5	**Incorporating cost allowances into the overall price control**

The extent to which our expenditure proposals have been disallowed in the draft determination leaves us with allowances that are insufficient to enable us to deliver our plan for our customers, communities and the environment. Our draft determination totex allowance is £5.3bn lower than what we requested in our April 2024 business plan. This includes a 10% reduction on base expenditure, 17% on water enhancement expenditure and 50% on wastewater enhancement expenditure before accounting for frontier shift efficiency (FSE) or real price effects (RPEs). We will not be able to deliver the proposals within our business plan with such a degree of underfunding. To the extent that delivery is not discretionary, this level of underfunding will make it harder for us to attract the equity we need and to restore our investment grade credit ratings so that we can access debt markets, and do so at low cost.

We provide our views on the costs needs of the business and outline how the draft determination impacts our ability to meet these needs below. For further detail, see TMS-DD-037 and TMS-DD-038.

3.1 Base costs

This section should be read alongside our detailed annex on cost efficiency (TMS-DD-037), where we further substantiate and provide supporting evidence for the summary below.

3.1.1 Our base cost allowance is insufficient for the ongoing provision of services to our customers, communities and the environment

Our base cost funding requirements are needed to enable the ongoing provision of water and wastewater services at current service and performance levels as well as a level of capital maintenance. As set out in Chapter 2 the external pressures on our operating environment mean that it is becoming more challenging to provide these services for our base cost allowance. We have a robust basis for estimating the costs associated with running our business. The future budget needs in our business plan are based on a combination of detailed operational tools and expert engineering assessments.

We submitted £12.1bn in our October 2023 PR24 business plan for base cost allowance, to deliver ten key outcomes in PR24. These outcomes reflect what our customers, communities and the environment want. We know this because we conducted extensive multi-layered engagement activities, including deep dive research with nearly 20,000 customers and analysis of 320 insight sources.

Figure 5: Our base costs will be used to deliver what our customers, communities and stakeholders want

For customers	For communities	For the environment
CS1. I want an easy customer experience and tailored support	**CI1.** I want you to have a positive impact on the community	**ENV1.** I want you to reduce your impact and restore the environment
AF1. I want fair and affordable bills		**WT3.** I want you to fix leaks and ensure there is enough water now and in the future
WT1. I want safe, high-quality drinking water		**WS2.** I want you to stop polluting rivers and to improve their quality
WT2. I want a reliable supply with minimal disruption		**WS3.** I want you to reduce emissions and reach net zero
WS1. I want you to prevent sewer flooding and take waste away safely		

At draft determination, Ofwat has allowed for £11.7bn base costs, 10% lower than the value outlined in our business plan. Note that Ofwat assessed the 10% efficiency against £13.0bn base costs as they used a gross value post re-allocations, and is before considering frontier shift efficiency or real price effects. This base cost allowance falls short of what is needed to carry out our everyday activities and will make it increasingly challenging to deliver the outcomes that matter to our customers and the environment. We set out both in our business plan and our totex technical document our base cost needs for PR24.

3.1.2 Our higher operating costs are not sufficiently recognised through Ofwat's modelling

In our annex on cost efficiency (TMS-DD-037 section 2.5), we argue that Ofwat's modelling approach fails to consider our specific circumstances, including substantially higher costs of doing business, population transience, and input costs compared to the rest of the sector. This has resulted in allowances that are substantially lower than the amounts needed to operate, maintain and renew our assets, as discussed in Section 2.1.4. While this may look superficially good for customers, because it keeps bills down, in reality it is not aligned with the best interests of our customers, communities or the environment because it does not allow us to run the business in a sustainable, resilient way. A persistent gap between the funding we have and the funding we need, beyond that which could be closed by a reasonable efficiency challenge, requires additional financing to close it and makes the company less attractive to investors. It fundamentally undermines the company's financial resilience, resulting more debt and greater cash flow challenge.

There is precedent from recent regulatory settlements in other sectors for many of these factors to be recognised and addressed when setting cost allowances. For example, at RIIO-ED2, UKPN received additional allowances for a range of company specific claims that reflected unique challenges with operating in London. These included higher costs associated with:

- Excavating and reinstating surfaces due to the higher presence of special surface types in London (including tarmacs used for bus lanes and specialist footway paving stones).
- Accessing confined spaces and tunnels in London, which required specialist resources to undertake inspection and maintenance activities.
- Application of the Congestion and ULEZ charging schemes in London.
- Wage inequalities across the UK, including cost of living factors in London.

3.1.3 We have identified alternative modelling and benchmark approaches that Ofwat should consider to determine a more appropriate cost allowance for our business

While there are some elements of Ofwat's econometric approach which align with sector and regulatory precedent - particularly regarding the classes of cost drivers included in the econometric base cost models, such as scale, density, and complexity - we believe that several changes are necessary. We have significant concerns with the specific choices of some measures included or excluded in the models for: A. Wholesale water and wastewater, B. Retail, C. Bioresources, and D. Unmodelled base costs. These are summarised in the following section and detailed in annex TMS-DD-037.

A. Wholesale water and wastewater

- **Density measure.** Evidence is clear that weighted population density measures based on Middle Layer Super Output Area (MSOA) data are more appropriate than Local Authority District (LAD) or simple averages, being that they are of relatively uniform size across the country and more granular. We suggest Ofwat drop the use of these other measures in favour of MSOA.
- **Capturing pumping requirements.** We also urge Ofwat use average pumping head (APH) exclusively, rather than number of booster pumping stations per km, given the stronger

engineering rationale for this driver, better econometric performance, and that concerns over data quality and levels of management control are now largely overcome.

- **Squared term of density.** We further suggest Ofwat include squared density terms within waste models, and provide supporting evidence from greater consequences of failure, complexity with other infrastructure, cost of works and other factors in high density environments, noting that the CMA supported this approach during its PR19 redeterminations.
- **Regional wage.** We support the claims submitted by the water companies in relation to regional wages. Ofwat should consider the best approach to recognise regional cost differences in its cost assessment framework. Without recognising these differences, we and other companies in the South East region are subject to an unfair efficiency comparison which results in underfunding for the level of wages in the region.
- **Asset age and replacement rate.** We present new evidence of sector-wide under-provision for capital maintenance in treated water distribution, stemming from a lack of important cost drivers within the models. This amounts to a shortfall of around £200m compared to our needs, evidenced with models that are statistically robust and with greater explanatory power than those without these drivers.

B. Retail

- **Inflation indexing.** Within the retail price control, we do not agree there is a compelling rationale for an absence of inflation indexing, not least given a frontier shift is further applied on top of any squeeze on allowances that inflation will bring.
- **County Court judgements.** In the cost assessment, we consider County Court Judgements (CCJ) to be an important driver of bad debt costs. CCJ as a variable are sufficiently exogenous and statistically significant in bad debt models. Because propensities to default are uniformly low, it is hard to find a single deprivation variable that would provide a robust proxy to it. This is an area where triangulation is important. Considering the statistical evidence provides assurance that propensity to default is captured more accurately by including CCJ data than without it.
- **Population transience.** We also reaffirm the importance of an adjustment to costs to recognise the significant impact of population transience on costs. Transience was recognised as a relevant factor in cost assessment at PR19 and the evidence has not substantially changed – the factor is still significant in some of the retail models (similar to the situation at PR19). We provide strong evidence from our business, based on a very large sample (over 1 million premises) of a clear link between transience and bad debt.

C. Bioresources

For bioresources, Ofwat's models omit key drivers of costs. There is clear evidence that costs in London are higher, due to higher population density, less farmland availability, and higher volumes of sewer sludge, and that this is outside management control.

We also provide evidence that the assumption of constant returns to scale is inappropriate.

Combined, we ask Ofwat to incorporate a squared population driver, and a measure of total work done in sludge disposal operations within its models. Ofwat should consider using a less stringent catch-up challenge alongside a glide-path to allow companies time to reach the efficiency benchmark in a service where Ofwat's view of efficiency was hitherto unknown. The price control is relatively new, and PR24 is this first review for which full reliance on separate models is made. We note the econometric models perform relatively weakly. Ofwat should therefore recognise the potential for them to under-provide for efficient cost recovery, while the modelling approach is given time to mature and companies given time to transition.

D. Unmodelled base costs

- **Business rates.** We welcome the change to the cost sharing arrangement on business rates since PR19. However, we are concerned about the cash flow implications of the combination of the level at which base cost allowances for business rates have been set and the sharing mechanism. Ofwat's allowance is £236m below our forecast business plan expenditure for AMP8 on business rates, which is a well-known, well-understood area of the cost base, which we evidence in annex TMS-DD-037. This is a large and material cashflow exposure over the five-year period until the true up takes effect, which could have a large impact on bills at the end of AMP8. We request that Ofwat fully allows these costs in the PR24 final determination. Failing this, we would request it implements the cost sharing true up annually rather than at the end of the period (i.e. in 2030) to mitigate cashflow concerns and smooth the impact on customers' bills.
- **Traffic Management Act (TMA) costs.** We consider that it is not appropriate to apply a 9% challenge to our forecast on the basis of the models' results. If the model were more appropriately specified (e.g. with the appropriate density measure, squared term of density, asset age and replacement), our comparative efficiency would look a lot better. TMA costs are also characterised by high uncertainty and limited management control. This combination renders it suitable for a different cost sharing arrangement. We propose that a similar cost sharing arrangement as for business rates applies to TMA costs.

3.1.4 Cost adjustment claims are crucial for us to recover a higher cost allowance to compensate for company-specific factors which are not captured in Ofwat's cost models

In our updated PR24 business plan submitted in April 2024, we included three cost adjustment claims (CACs), which covered: mains replacement, retail transience and network reinforcement. These claims ensure that we can maintain infrastructure, meet rising demand, and manage fluctuating customer bases while upholding regulatory standards and our service quality. As mentioned in Section 2, due to higher input costs specific to our region and company, this draft determination allowance, without the three submitted CACs, is insufficient and makes these areas undeliverable. We summarise our main concerns below for the mains replacement CAC and network reinforcement CAC, see annex TMS-DD-038 for detailed evidence.

Mains replacement: We put forward a stretching, yet achievable plan as part of our initial submission, which would see us deliver 500km of mains rehabilitation in AMP8 (over twice the amount we will deliver during AMP7). In the draft determination, Ofwat has challenged us to go much further and deliver c.700km of mains replacement in AMP8. We believe that it is important to challenge ourselves to deliver more however, we believe that 700km to be undeliverable in AMP8, given our starting position and the 70% reduction on our proposed unit rates. We therefore propose to deliver 553km of mains replacement in AMP8 at the unit rates we proposed in our original submission, which are aligned with the unit rate Ofwat has allowed through the conditional allowance process in AMP7.

Network reinforcement: Ofwat assesses water network reinforcement expenditure as part of the modelled base cost as it shares similar cost drivers to base costs. We believe that Ofwat's base cost model does not provide sufficient network reinforcement allowance. The draft determination will not enable all the proposed new connections to be accommodated without a net deterioration in service levels. Ofwat's approach creates an avoidable trade-off between our ability to support growth and new development, and our ability to maintain service levels, which is a bad outcome for customers, communities and the environment. We provide additional evidence that capital maintenance investments have already been taken into account with the CAC and we provide additional optioneering of solutions which enable the connection of new properties. We also provide third party assurance to confirm that our proposed costs are efficient.

3.1.5 Collectively, these modelling adjustments will ensure that our base cost allowance represents a reasonable and efficient challenge

Our proposed adjustments to Ofwat's models and assumptions across water and wastewater, retail, bioresources, and unmodelled base costs are designed to enhance the accuracy of our base cost allowance at final determination. Table 1 earlier in this document provides an overview of our draft determination response on base costs - for a fuller explanation and supporting evidence of our proposed adjustments for base cost allowance, see annex TMS-DD-037. By implementing these targeted changes, we aim to establish a more reasonable and efficient challenge that better reflects the true costs of delivering our services. Collectively, these adjustments will give us the best chance of delivering against our ambitious and stretching PCLs, as set out in Section 5 of this document and annex TMS-DD-039.

Table 3: Our base cost position

Base Cost Allowance	Our business plan	Ofwat DD	Our updated need…
	£12.1bn	£11bn	£13.3bn

3.2 Enhancement costs

This section should be read alongside our annex enhancement costs (TMS-DD-038), where we further substantiate and provide supporting evidence for the summary below.

The enhancement programme that we and the rest of the industry are required to deliver in AMP8 is by far the largest and most complex since privatisation. The improvements it will deliver to customers, communities and the environment are substantial. We welcome the fact that Ofwat has addressed uncertainty, including uncertainty over deliverability, in its draft determination. However, Ofwat's draft determination itself increases the challenge we face in delivering the plan because the scale of the cost 'efficiency' challenge is not realistic. We urge Ofwat to carefully consider the additional evidence and analysis contained in this representation. We remain open to constructive dialogue with Ofwat and wish to work towards an acceptable final determination.

We set out the different concerns about the scale and nature of Ofwat's challenge to our enhancement case costs below.

3.2.1 Ofwat's assessment of our enhancement cases means we will be unable to deliver the improvements needed for our customers, communities and the environment

The majority of our proposed enhancement schemes are driven by statutory requirements. We take our compliance obligations extremely seriously and will do our utmost to deliver them. But the extent to which Ofwat has disallowed costs in its draft determination threatens our ability to deliver on statutory obligations, and – as we seek to prioritise compliance delivery in the face of under-funding - will create additional risk to performance and resilience across our assets and activities.

Ofwat's proposed £521m reduction to our water enhancement expenditure includes:

- £92m reduction in allowance across the South East Strategic Reservoir Option (SESRO) and the Thames to Southern Transfer (against £389m submitted in our April business plan). These schemes are critical to address future water resource requirements and address drought risk. We provide evidence in TMS-DD-038 demonstrating our costs are efficient and should be allowed in full:
    - We have benchmarked SESRO costs against Anglian Water reservoir costs and which shows that our development costs in a similar range.
    - Independent benchmarking carried out by Oxford Global shows that our development cost forecasts are comparable to similar projects.
- £70m reduction in the allowance for our smart metering programme (against £257m submitted in our April business plan) which puts pressure on our statutory Water Resources Management Plan and our ability to delivery water efficiency improvements in line with government expectations. We provide evidence in TMS-DD-038 that our costs should be allowed in full:
    - we recommend that Ofwat places further weight on companies that have already embarked on smart metering and have robust market tested costs
    - Ofwat also needs to consider the forward work mix for metering programmes and the balance of internal versus external metering in particular.

Ofwat's proposed £3,031m reduction to our wastewater expenditure includes:

- £540m reduction to meet statutory requirements relating to phosphorus removal (against £1,508m submitted in our April business plan). Over the last two decades, we have made significant strides on phosphorus removal with our investment programme delivering a 70% reduction in phosphorus levels across our regions. However, continuing tightening of permit levels (36% of our permits require phosphorus levels below 0.2 g/l) results in the need for more expensive forms of treatment (e.g., two-point chemical dosing and tertiary treatment). Thames Water is the only company in the sector with such stringent permit requirements (see further evidence in TMS-DD-038), which exposes us to higher unit costs compared with other companies. Ofwat's proposed level of funding is insufficient to enable us achieve compliance with the permit requirements.

- £298m reduction in our statutory programme to reduce storm overflows (against £815m submitted in our April business plan). We consider that we have already challenged the costs of this important programme of work and costs should be reinstated in full:
    - we recommend that Ofwat needs to capture the cost of providing additional flow to full treatment in its modelling (by considering the capacity at sewage treatment works or increases in litres per second as an explanatory variable)
    - we provide additional evidence on land costs and costs and benefits of green solutions.
- £330m reduction on our proposed expenditure to comply with the Industrial Emissions Directive activities (against £563m submitted at in our April business plan). In TMS-DD-038, we provide further evidence of cost efficiency (including external assurance) and are seeking a deep dive of the costs in this area of our expenditure.

Despite the innovative mechanisms that Ofwat has introduced to address deliverability and uncertainty in the draft determination, we believe that the scale of the 'efficiency' challenge that has been set – 17% on our water enhancement cases and 50% on our waste water enhancement cases - is simply unrealistic. We have reflected on our cost estimates following Ofwat's cost assessment. While we have found scope to take on additional efficiency challenge in a few areas, our view remains that the majority are efficient. We provide evidence on the efficiency of our costs, on a case-by-case basis, in our enhancement cost annex (TMS-DD-038).

3.2.2 Ofwat's approach to benchmarking enhancement costs is not consistently robust due to shortcomings in data availability and model specification.

We appreciate that the increase in the size of the enhancement programme at PR24 (largely driven by statutory requirements) and associated cost is a factor in Ofwat's greater use of modelling based tools to assess cost efficiency. However, the modelling approach is often too simplistic and the available data not yet sufficiently mature to bear the weight of the challenge. Ofwat's models have produced a scale of cost challenge that jeopardises the delivery of the programme and its associated benefits to customers and the environment. The modelled allowances create a substantial funding gap which subsequently raises challenges to financeabilty and investibility of companies as a whole.

We discuss our concerns regarding Ofwat's models on a case-by case basis in annex (TMS-DD-038) and present a summary below.

- **WINEP phosphorous model.** Ofwat's models are statistically poor, particularly the ones based on historical data.
    - We provide evidence to demonstrate that historical costs are not a reliable basis of forecasting the cost of future projects.
    - We identity that Anglian Water's data significantly reduces the quality of the models and recommend that Ofwat explore this further (including the option of removing Anglian's data from the model altogether).
    - In AMP8 Thames Water has the most stringent permits in the sector We are the only company in the sector with a significant (36%) share of permits requiring phosphorus levels below 0.2 g/l – the only other companies are Seven Trent Water with 2% and Southern Water with 1%. Ofwat's model treats all permit

levels up to 0.25 g/l the same, which fails to account for the significant additional stretch (and associated cost) required to meet permits below 0.2 g/l.

  - Finally, Ofwat's models should be based on *design* capacity (population equivalent), not *actual* capacity as used by Ofwat.

- **Sewage treatment growth.** Ofwat's PE model does not capture the cost of decommissioning and providing additional treatment capacity on sites with a limited footprint. Ofwat should instead conduct deep dives on a greater proportion of our plan for AMP8 to get an appropriate understanding of the actual costs and cost drivers for these schemes, that reflect the specifics of each site.
- **Industrial Emissions Directive.** Ofwat's models use two cost drivers: bund wall length and surface area of tank covers. The models do not perform well, and we would like Ofwat to carry out deep dives on all 25 of our Sludge Treatment Centres using the additional information we have provided. If this is not possible, Ofwat should make material improvements to its models to reflect the true extent of costs associated with providing the full scope of works required to comply with the Industrial Emissions Directive permits. This includes capturing important cost drivers such as the height of the wall and the number of tanks to be covered.
- **Metering enhancement.** Ofwat's model accounts for the volume of meters installed, but not the type of meter installations. This has a material effect on allowances because installing internal meters is significantly more complex and expensive compared to installing internal meters. Ofwat should collect data on the type of meter installations and use it in its models. In the absence of this data, we suggest that the density driver should be used as a proxy for the split between the external and internal meters. Using this driver improves the quality of the model and accuracy of its results. Furthermore, in using average unit costs, Ofwat does not give adequate weight to the evidence from companies with extensive experience of delivering smart metering programmes (like us). Companies with delivery experience are able to provide cost estimates based on actual contractual data, unlike the companies with less experience and fewer real world data points to drawn on.

3.2.3 We have further refined our business plan since the April submission to reflect the latest available information and to address raised by Ofwat in the draft determinations.

We have **reduced** our Business Plan request for funding in the following areas:

- Wastewater WINEP: continuous water quality monitoring. We accept the lower unit cost proposed by Ofwat. This decision has been informed by the latest available market data and our early work with the supply chain in planning for the delivery of this programme. This reduces the funding requested from £89.1m to £51.7m.
- Wastewater WINEP: storm overflows investigations. Since we submitted our business plan, the Environment Agency (EA) issued new guidance on investigations. In light of this regulatory change, and in consultation with the EA, we reduced the scope of the programme. This reduces the funding requested from £74.9m to £22.3m.

For these programmes, we have set a stretching efficiency challenge to the forecasts that were last submitted in April. Customers are only incurring the cost of what we deliver and as such will never pay twice for the same activity.

We have also identified areas of additional enhancement scope requiring an **increase** in funding requested. These areas are:

- WINEP storm overflows programme scope change to include works at Benson STW: £31.5m additional funding needed;
- Additional water and wastewater resilience projects: £69m additional funding needed (arising from Ofwat's draft determination cost modelling and request);
- We have amended the scope of our metering enhancement programme, resulting in a change in allowance requested from £257m to £287m. The metering programme set out in our April business plan submission assumed delivery of the Green Economic Recovery (GER) metering programme in AMP7. Following Ofwat's decision not to amend the funding conditions for the GER scheme, we have re-structured the metering programme in AMP8.
- The forecast cost of completing the AMP7 London Water Improvement Conditional Allowance in AMP8 has increased from £26m to £76m.
- £140m allowance has been included to reduce leakage in line with Ofwat's performance commitment proposed as part of draft determinations.
- We propose and additional £367m of expenditure for our Wastewater Asset Assurance Programme (WAAP), to address the risk that our assets at 157 wastewater sites operate beyond flow permit conditions. Ofwat has stated that: "These are costs that Thames Water has avoided incurring in the past by failing to address issues at its WWTW [wastewater treatment works] in a timely manner."

We have provided additional evidence to address Ofwat's deep dive comments on the case-by - case basis in annex TMS-DD-038. This includes detailed Option Development Reports demonstrating our robust optioneering processes, as well as third-party cost assurance. ARUP's findings can be found in their report TMS-DD-115.

3.3.4 We have refined our Strategic Resource Options costs and present an alternative approach to allocating expenditure across "baseline" and "contingent" allowances.

In the draft determination, Ofwat stated the importance of pre-construction development of major projects to mitigate the risk of cost overruns and project delays. However, Ofwat's steer is counter to its cost challenges applied to our Strategic Resource Options (SRO) programme. Following constructive engagement with RAPID and Ofwat since our October submission, we have ensured our representation (Thames Water PR24 DD Response - Strategic Resource Options - TMS-DD-43) contains comprehensive development costs to sufficiently de-risk the SRO programme. We are therefore proposing a cost allowance of £956m - an increase of £659m compared to Ofwat's draft determination.

In the "Major projects development and delivery" document, Ofwat has proposed splitting SRO development allowances between "baseline "and "contingent". Ofwat has proposed only baseline funding will be included in AMP8 revenue allowances, while any contingent expenditure incurred will have to be financed by Thames Water and reconciled at the end of the AMP.

We recognise Ofwat's concern regarding customers funding, bearing the risk of large infrastructure investments that may not progress beyond a Development Consent Order (DCO) milestone and we understand the rationale for splitting cost allowances in this way. However, for the purpose of this response, we have changed the definition of baseline and contingent spend.

We have decoupled the costs from the consenting decision point and simply split costs between those we feel are essential costs for the development of the SROs into baseline and those with a higher degree of uncertainty into the contingent allowance. Of our revised AMP8 allowance, we have assigned £486m as baseline expenditure and £470m as contingent.

We do not support Ofwat's proposed approach to funding the contingent allowance, as set out in the draft determination. For us to finance this magnitude of allowance represents a significant cash flow pressure that needs to be addressed for us to be able to efficiently deliver the SRO programme. This financeability challenge must be viewed in conjunction with other decisions that Ofwat is taking which may have the effect of creating a funding gap or a time lag between costs incurred and cost recovered. Only when Ofwat has considered all these things together, from a Thames Water perspective, will it have a view of the impact of the determination on the company's financeability and only then will Ofwat be able to take a reasoned decision on that determination.

To mitigate the financeability risk from the contingent allowance, we propose a gated Customer Protection Mechanism. This mechanism would release funds at pre-determined trigger points, the scope and timing of which will be agreed with RAPID once our programme becomes more certain. Further detail given in section 4 of TMS-DD-43.

Summary

If Ofwat were to accept our enhancement cost modelling requests and additional evidence for optioneering and cost efficiency, we could effectively deliver the improvements for our customers, communities and the environment. The tables below provide a summary of changes in totex requested for selected water and wastewater enhancement schemes. In all other areas, our enhancement costs remain unchanged from those that we put forward in our April 2024 business plan.

Table 4: Summary of changes to water enhancement totex request

Enhancement Case	April business plan £m	DD Allow £m	DD Response £m
WINEP Water	151	81	144
Cyber	54	38	135
Water Efficiency	55	59	41
Asset Health Improvement	612	500	474
Trunk mains	167	0	0
LWICA Carryover	0	0	76
Lead	94	82	94
Leakage (New)	0	48	140
Metering	257	187	311
Crypto	179	178	179
Reservoir Safety	11	0	11
Water supply resilience (WSSRP)	459	437	451
Water resilience	0	34	33
SEMD	500	486	500
Strategic Resource Options	389	297	973
Other Water Resources schemes	22	78	79
WINEP7 Carryover	173	98	174
TOTAL	**3,123**	**2,602**	**3,814**

Table 5: Summary of changes to wastewater enhancement totex request

Enhancement Case	April business plan £m	DD Allow £m	DD Response £m
WINEP Storm Overflow	815	517	809
WINEP Phosphorous	1508	968	1519
WINEP Chemicals	212	125	218
WINEP Other	358	257	279
TTT Price Control	85	-16	57
First time sewerage	10	10	10
Sewage treatment growth	355	204	355
IED	563	230	534
WINEP7 carryover	961	265	1007
Resilience	0	30	29
Cyber*	81	0	0
Asset Health (exc WAAP)	497	500	512
WAAP	677	0	1044
TOTAL	**6,121**	**3,091**	**6,374**

*Note that all Cyber investment has now been assigned to water in accordance with Ofwat's treatment of all companies in the draft determination.

3.3 Allocation between base and enhancement costs

3.3.1 Ofwat has wrongly calibrated its assumptions about 'what base buys' and assumes much of our request for enhancement funding to be already covered under the base allowances

Ofwat's draft determination does not appear to create much of a gap in base funding compared to our business plan submission. However, Ofwat assumes the scope of what base buys to be greater than our historical activity. Enhancement activities which we propose are additive and should be funded through enhancement cost allowances. As set out above, Ofwat has disallowed a significant portion of our proposed enhancement case, of which a large proportion are statutory obligations.

This decision was based on Ofwat's view that our proposed spending on enhancement activities 'overlap' or fall into what Ofwat consider to be routine, year-on-year expenditure to deliver a base level of good service to customers and the environment and maintain the long-term capability of assets. We reject the premise that these enhancement activities are already funded in the base allowance.

Ofwat's determination of totex allowance materially understates the actual reduction in base allowances compared to what we have to deliver funded in base. Effectively, we are being expected to deliver far more for less as a result of Ofwat's decisions to reclassify enhancement activity as base. Ofwat's continued expectation of performance improvement from base is becoming less realistic. The additional expectation of what can be delivered form base in terms of outputs (for example 700km of mains renewal) is misaligned with the fundamentals of its regulatory regime, which focuses on outcomes and performance, not outputs. The scope of what base buys is therefore ill-defined.

Ofwat cannot reasonably reject the actual base cost gap in its decision to reallocate enhancement to base. Ofwat should reconsider the totex package for the PR24 final determination, so that it takes a reasonable view on what base allowances buy and considers improvements on top of that as enhancement cases, assessed on a case-by-case basis. Only in this way will Ofwat create a final determination that enables us to deliver, to what is required, to improve our performance day-to-day and the network as a whole.

3.3.2 Inadequate allowance for capital maintenance expenditure

Where we have not delivered performance in line with the rest of the industry, a key driver of this is the need to improve the health of our ageing infrastructure. This situation has accumulated over decades, during which the company has not had sufficient funding to undertake capital maintenance and asset replacement at sustainable levels. In our October 2023 PR24 business plan, we submitted three cost adjustment claims, two of which enable us to implement a step change in capital maintenance across mains replacement and network reinforcement.

In our totex technical document (TMS-DD-037), we present new evidence of sector-wide under-provision for capital maintenance in treated water distribution, stemming from a lack of important cost drivers within the models. This amounts to a funding gap of around £200m, evidenced by models that are statistically robust and with greater explanatory power than those without these drivers.

These significant reductions in capital maintenance coupled with the significant disallowances of almost £1bn proposed to our expenditure to address asset resilience and asset health will significantly impede our ability to undertake the critically important capital maintenance work our network requires.

Asset health and capital maintenance are inadequately provided for in Ofwat’s cost models, with needs that are highly specific to the portfolio of assets a company has. We are supportive of other companies proposals that would allow greater funding for capital maintenance activities.

3.4 Other key assumptions in determining cost allowances

3.4.1 Ofwat catch-up efficiency benchmarks should not provide an unrealistic target

We consider Ofwat's application of a catch-up efficiency methodology for determining efficient costs is only appropriate when there is robust and comparative information and where Ofwat can be confident it has taken our specific circumstances into account. Benchmarking using an upper quartile (UQ) approach has been used on Ofwat’s base modelling in prior price reviews, and some of the models and techniques have been refined overtime with improved comparative information quality. To manage the significant levels of PR24 proposed expenditure, Ofwat has developed new approaches using new models and information that is less comparable between companies. We question the validity of the modelling techniques Ofwat has adopted more generally given the lack of robustness of the data and models. To apply an UQ benchmark, exacerbates our concerns and does not present a realistic efficiency challenge.

Across the enhancements costs evaluations, Ofwat has applied approaches that we consider to be inappropriate as they are not based on compelling comparative analysis. For example, on storm overflows, Ofwat’s application of an UQ benchmark is not appropriate. Not only do the models lack robustness in themselves, but the data underpinning them does not have sufficient history to develop meaningful time series findings and more fundamentally is not directly comparable across companies who face different topography issues.

We request Ofwat set a challenging and achievable efficiency target. Where Ofwat identifies efficiency targets that are simply unrealistic, as a principle, it must adopt a five-year glidepath to support the company in driving toward that target over time.

3.4.2 RPEs and the indexation of energy, labour, chemicals and material costs

Ofwat proposes a RPE mechanism for labour and energy inflation (both ex-ante allowance and a true-up); a true up mechanism for material price inflation on enhancement expenditure only, and no allowance or true-up for chemicals inflation over and above CPIH.

We welcome the additional inflation protection at PR24. These are costs that are substantially beyond companies' control and we make three representations in this area. We consider that:

- Ofwat's choice of forecast energy prices is inappropriate.
- Chemicals should have an RPE mechanism.
- The true-up for materials should apply to totex, not only to enhancement costs.

Finally, we note there is regulatory precedence in this area. Ofgem has confirmed in its RIIO-3 decision that it would continue to apply an annual true up to RPEs, as it has done in RIIO-2. It has emphasised the importance of RPE true-up to mitigate forecasting error risk in the current environment of elevated input cost volatility.[20]

Energy

We support the introduction of an annual true up mechanism for energy prices. However, we disagree with Ofwat's choice of energy price forecasts to calculate the ex-ante allowance and the calculation of the pre-adjustment energy costs.

Ofwat uses wholesale season ahead energy prices based on futures contracts, sourced from Bloomberg as of March 2024, following the advice of its consultants, Cambridge Economic Policy Associates (CEPA). However, we believe that these are low relative to other market forecasts and do not incorporate the impact of hedging which will delay the energy price reductions for a company with a normal hedging policy. This creates a significant risk of a negative cashflow impact for companies against what we predict we will spend during AMP8. We also note that there is significant uncertainty regarding energy forecasts, which lead to c. 20% variation in prices on a day-to-day basis.

There are several alternative options for Ofwat to consider to address the sizeable cashflow challenge which further heightens our financeability issues.

- Water UK has commissioned Baringa to provide an alternative perspective. They determined an alternative approach to utilising the day ahead curve and applying an alternative DESNZ index (extra-large users).

[20] Decision – RIIO-3 Sector Specific Methodology Decision – Overview Document 18 July 2024 9.6, 9.18-9.20

- Triangulating other available forecasts, such as those from consultants' forecasts including Cornwall, Aurora, Baringa and AFRY.
- Use an econometric approach to capture the lagged impact of historic hedge arrangements on future energy costs.

In light of the difficulty in forecasting energy prices in AMP8, we consider that an annual true-up is more appropriate than at the end of the AMP to reduce the impact of the almost inevitable forecasting error on both companies' balance sheet and consumer bills.

Chemicals

We consider Ofwat should introduce a true-up mechanism for chemicals. Chemicals is a material component of companies' costs. Moreover, chemicals represent a significant proportion of costs in the bioresources price control. We disagree with setting a materiality threshold of 10%. We do not agree with the rationale for setting a high materiality threshold in an area where there is no information asymmetry, and a true-up mechanism does not require disproportionate effort.

There are several commercial chemical price indices available that are suitable for this role. The ONS statistics can be adapted to follow key chemicals relevant to the sector.

Energy is a big cost driver for chemicals. For example, one of our chemicals contracts for liquid oxygen is linked to day-ahead energy prices. Chemicals costs are likely to move with energy, that requires an uncertainty mechanism to be introduced.

Materials

We support the proposed true-up mechanism for materials prices for enhancements. However, we think that the Construction Output Price Indices (COPI) is not a suitable index. COPI is an output price index, rather than an input price index. The proposal has the effect of double counting the productivity growth already factored into the separate frontier shift challenge.

We can suggest other indices worth using to create a reference index [21].

We consider that an ex-ante RPE component is appropriate for materials in base costs. None of the underlying issues that warranted an ex-ante allowance for materials for enhancement investment, are different in the case of base cost materials.

3.4.3 Frontier shift is not aligned with UK productivity performance

We strongly reject Ofwat's assumption of a 1% frontier shift as this is not supported by the broader evidence. For 15 years, the UK has faced a 'productivity puzzle' that is well-embedded and does not show signs of improving. Ofwat's successive decisions on frontier shift within price reviews have further been at odds with observed changes in productivity in the sector, this has

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[21] For example using certain tables in the Building materials and component statistics and not include kitchen furniture but include concrete and pipes and fittings [Construction_building_materials_-_tables_June_2024.ods (live.com)](). Also commercial indices IBIS World UK stats should usefully be used [Construction Materials Price Index - United Kingdom | IBISWorld]().

created a funding gap, to which some companies at least will have responded by reducing spend and/or increasing debt levels, with negative impacts on the physical and potentially financial resilience of the sector.

Ofwat’s frontier shift estimate is based primarily on the analysis of the EU KLEMS data carried out by CEPA. As part of this analysis, CEPA assessed historical Total Factor Productivity (TFP) growth in industries considered comparable to the water sector. CEPA find that the scope for frontier shift lies in the range of 0.5% to 1.2%.

We are concerned that Ofwat has reached its initial view on the scope of the frontier shift without placing due weight on the evidence provided by Economic Insight and from other sources which would balance out the evidence provided by Ofwat’s economic advisors. In addition, we consider Ofwat has adopted a more aggressive frontier shift based towards the upper end of its economic advisors' conclusions, on the basis of somewhat speculative assumptions that are not clearly evidenced. We provide a detailed analysis of the evidence mentioned above to support our position in our cost efficiency document (TMS-DD-037).

Based on the available evidence, we consider that the 0.45% frontier shift rate proposed in our business plan remains the correct target. The rate is based on the benchmarking of the EU KLEMS data carried out by Economic Insight, similar to the analysis done by CEPA. Using a slightly different industry comparator set and different time periods for assessing historical frontier shift, Economic Insight arrived at a ‘PR24-focused’, ‘plausible’ frontier shift range between 0.3% - 0.8% per year.

We ask Ofwat to reconsider its frontier shift assumption and come to a more balanced conclusion which takes account of all the available evidence.

3.5 Incorporating cost allowances into the overall price control

The combination of Ofwat’s approach of using Upper Quartile benchmarks, aggressive frontier shift assumption and totex cost sharing factors creates disproportionate levels of downside risk exposure. These factors not only exceed what is ‘necessary’ to incentivise effective management of costs but also significantly impacts the investibility and financeability of our regulated appointee (which we assess in Chapter 5). Ofwat has not taken account of these factors as a package and has not done any meaningful assessment of the impact this will have on individual companies. Consequently, this approach Ofwat has adopted will ultimately harm the delivery of services to our customers and the environment.

4. Draft determination response on deliverability and monitoring

4.1	**New approaches to delivery**
4.1.1	We broadly support Ofwat's new approaches to planning, funding and monitoring of delivery, with some suggested modifications
4.2	**Enhanced Engagement and cost sharing for delivering enhancements**
4.2.1	We support light tough process on delivery of enhancement schemes and lower cost sharing rates
4.3	**Delivery Mechanism and Delivery Action Plan**
4.3.1	We support the inclusion of the delivery mechanism in Ofwat's draft determination and have provided an updated view of the programmes and costs that it should address
4.3.2	Ofwat's delivery mechanism ensures funding is released proximate to when expenditure is incurred
4.3.3	We are committed to continue building delivery capacity for AMP8 and have identified a range of activities to support this that form the foundations of our Delivery Action Plan
4.4	**Large scheme gated process**
4.4.1	The large scheme gated process needs refinement
4.4.2	We support the introduction of additional gated processes, but have concerns that the proposed funding approach will slow down delivery
4.5	**Asset Health Improvement Gated process**
4.5.1	The gated asset improvement allowance provides a way forward to enable and de-risk investment in key areas
4.6	**Price Control Deliverables**
4.6.1	The draft determination approach to Price Control Deliverables introduces unnecessary downside risk that will impact our ability to finance our plan and deliver key outcomes for the benefit of our customers and the environment

4.1 New approaches to delivery

4.1.1 We broadly support Ofwat's new approaches to planning, funding and monitoring of delivery, with some suggested modifications.

AMP8 will require a step change in investment and delivery of schemes to meet new statutory and regulatory requirements, and to deliver against increased customer expectations and for the benefit of the environment. In our April 2024 business plan submission to Ofwat, we detailed how we had stretched our October 2023 PR24 business plan to accommodate these additional statutory schemes. Some enhancement programmes where we did not yet have full line of sight to delivery were proposed to be included within a delivery mechanism.

In this section we respond to four components of Ofwat's delivery regime:

- Enhanced engagement & cost sharing rates
- Delivery mechanism

- Large scheme gated process
- Thames-specific Asset Improvement Gated process

We end this section with our response on Price Control Deliverables (PCDs).

4.2 Enhanced engagement and cost sharing for delivering enhancements

4.2.1. We support light touch process on delivery of enhancement schemes and lower cost sharing rates.

The cost uncertainty in delivering enhancement schemes is materially higher than base costs and more outside of company control, as they are driven by statutory requirements. Although not a substitute for a reasonable up front enhancement allowance, we welcome the lowering of cost sharing rates for enhancement costs to a 40% company share and the introduction of enhanced (25%) cost sharing rates for investments associated with the Industrial Emissions Directive and large schemes that are not provided with a formal gated allowance.

4.3 Delivery Mechanism and Delivery Action Plan

4.3.1 We support the inclusion of the delivery mechanism in Ofwat's draft determination and have provided an updated view of the programmes and costs that it should address

In our draft determination response (annex TMS-DD-038, TMS-DD-045 and TMS-DD-002), we provide an updated view of the costs associated with schemes to be considered through the delivery mechanism, following further evidence and engagement with the Environment Agency (EA) as outlined in Section 3. These include the WINEP storm overflows, as well as the phosphorous and chemicals programmes.

We are proposing to include our programme to comply with the Industrial Emissions Directive in the delivery mechanism. Following discussions with Defra, the EA and Ofwat earlier this year, we believe we have an aligned view on the scope that must be delivered. We do not agree with the scale of the efficiency challenge applied in the draft determination and the operational challenges of undertaking this programme are substantial. It is important to note that applying a cost efficiency does not change the scope of what must be delivered. We discuss this further in TMS-DD-038.

Note that the cost of deploying alternative water supply we propose is addressed through an uncertainty mechanism as described in TMS-DD-041.

4.3.2 Ofwat's delivery mechanism ensures funding is released proximate to when expenditure is incurred

Within the context of the delivery challenges we face in AMP8, we recognise the additional oversight associated with funding allocated to the delivery mechanism. Our strong view is that Ofwat's 'delivery mechanism' as set out in the draft determination is the appropriate process for Ofwat to follow. This process enables us to apply for funding (with evidence of need, optioneering and unit cost efficiency) each year, unlocking funding in the following year, aligned with when the costs will be incurred. In this way the 'delivery mechanism' allows us to finance the investment we need to make, helping us to maximise what we can deliver for customers and the environment. If Ofwat uses gated allowances that create a time lag between costs incurred and costs recovered, this will consume financeability headroom and ultimately curtail what we can deliver. As an aside, it is important that Ofwat take account of the financeability impact of its chosen gated processes in any assessment of company financeability, even one conducted on the basis of a notionally geared and efficient company.

It is also important that adjustments to our revenue allowance are made in a way that fully reflects the nature of costs associated with schemes that advance through the delivery mechanism. The draft determination proposed adjusting RCV runoff and return components of customer bills, but should recognise that expenditure may involve both capital and operating expenditure and the split of slow money (RCV accretion) and fast money (PAYG) needs to reflect this. If it does not, this may inadvertently result in financeability challenges, depending on the nature of companies' covenants.

4.3.3 We are committed to continue building delivery capacity for AMP8 and have identified a range of activities to support this that form the foundations of our Delivery Action Plan

Since our April submission, and as part of our draft determination response, we have continued to assess our deliverability capabilities, to identify opportunities to further accommodate statutory schemes within our AMP8 programme that will deliver improvements for both our customers and the environment. Annexes TMS-DD-045 and TMS-DD-096 summarise the outcome of this assessment, which has identified specific concerns around the capacity of the supply chain in relation to non-infrastructure contractors.

In response to the delivery challenges we have identified, we have produced a Delivery Action Plan (TMS-DD-096) which contains a comprehensive set of activities that represents a commitment to build additional delivery capacity for AMP8. This plan brings together the planned activities from our ongoing Turnaround Plan and our AMP8 Mobilisation Programme, alongside key elements of Asset Operations and Capital Delivery (AOCD) Transformation. Key highlights of our Delivery Action Plan include:

- Internal initiatives to unlock delivery capacity: We are implementing new initiatives to increase our monitoring of capacity to enable to further opportunities to increase scope for AMP8 delivery. These include new reporting standards that will be embedded within our business management processes. We are also focused on increasing our ability to identify and respond to risk and are establishing a new risk and investment team to enhance our long-term scenario planning capabilities.
- External engagement and partnerships with suppliers: We are working collaboratively with major contractors to address resourcing requirements for AMP8 and beyond, including a particular focus to address concerns identified around non-infrastructure supply chain capacity. We are also committed to providing greater visibility of our programmes to the supply chain and aim to pre-brief £2.3bn of water schemes (54% of AMP8 Programme) and £5.6bn of wastewater schemes (83% of AMP8 Programme) before AMP8 commences. We will need to further adapt our working with the supply chain to strike the right balance between providing them with the clarity they seek on the pipeline of work that enables delivery efficiency with potentially extensive use of gated mechanisms in AMP8.

Together, the actions identified in our Delivery Action Plan will support the continued development of delivery capacity in AMP8, within both our business and the wider supply chain, that is necessary to deliver a step change in investment for the benefit of both our customers and the environment.

4.4 Large scheme gated process

4.4.1 The large scheme gated process needs refinement

Delivering large schemes efficiently and on time will be critical to meeting the customer and environmental ambitions in our plan. However, if applied too rigidly, it is well-recognised that a gated approach can drive unintended consequences that impede project delivery and risks increasing costs. These unintended consequences include:

- Increased costs and supply chain risks: Incrementally releasing funding through a gated process will reduce our ability to access the supply chain. Unlocking funding in stages will prevent us from contracting with suppliers for the end-to-end delivery of large schemes, driving up the overall cost of a solution. It will also hinder our ability to give our supply chain partners the certainty they seek over the pipeline of work, as we are not in a position to commit spend without clarity on funding. Our Delivery Action Plan includes a specific action to identify opportunities to increase whole AMP8 incentivisation in the supply chain – certainty over funding will support contracting structures over longer periods that will deliver benefits for our customers. We are acutely aware of the constrained and competitive nature of the UK supply chain across infrastructure and utilities sector – any uncertainty created by the gated process will further exacerbate the physical delivery challenges we face in AMP8.
- Financeability risk: Ofwat's proposals on contingent funding (whereby once an allowance is set at Gate 3, the company takes on the financial burden until the end of AMP8 when there will be an RCV log up) creates further financeability pressure. Any funding that was "contingent" would require an additional equity injection to fund. In Section 6 and TMS-DD-40 and TMS-DD-041, we discuss the current levels of equity required and the implications of this on the financial resilience of the company.
    - A more appropriate treatment would be for an in period adjustment within the large scheme gated process, similar to that proposed by Ofwat in the delivery mechanism as discussed in Section 4.3.2. This would mean that if a scheme was successful at Gate 3 by November, then the RCV and adjustments to the bill could be reflected from 1 April the following year. Under this approach, customers remain protected from uncertain or inefficient costs, whilst companies are protected from having to take on excessive financial burden.

The risks outlined above are also more likely to materialise where the gated process unnecessarily slows down decision making and progress towards project delivery. There are several areas where the gated process could be simplified to reduce these risks for the benefit of our customers and the environment:

- Rigid requirements. The exploratory nature of solution design means that not all information is likely to be available with the degree of accuracy required to progress to the next stage. For example, robust cost benefit analysis to show the best value for customers and the environment at Gate 1 is likely to be impacted by evidence gathered in Gate 2

(Design Confirmation) and Gate 3 (Solution Delivery Plan). The stage gate process must allow solution specification to be responsive to emerging opportunities.

- **Extensive requirements.** Ofwat outlines an extensive scope of work required for each gate, recognising that this will be an "involved and resource intensive" process.[22] In comparison, Ofgem has recognised the complexity associated with its uncertainty mechanism regime and has sought opportunities to make this process more efficient for the RIIO-3 price control.[23]
- **Burdensome change management.** Ofwat requires changes to a workstream (however material) go through the independent assurance process. A streamlined approach would support lessons learnt from prior submissions to be embedded in new workstreams.
- **Lengthy timeframes.** Ofwat's indicative timelines imply a minimum of 1 year and 6 months to pass through the gated allowance process, and a maximum 3 years and 4 months. This is not sufficiently agile and responsive for investment to be made as soon as a need becomes evident. Indeed, Ofwat acknowledge that it is not in the best interests of customers and the environment to wait until 2030 to begin improvement work; and that it is important for customer confidence for Thames Water to deliver outputs for some workstreams in the first year of AMP8.

4.4.2 We support the introduction of additional gated processes, but have concerns that the proposed funding approach will slow down delivery

We support the additional gated processes introduced in the draft determination. We accept that the Enhanced Engagement Gate will be applied to our Rye Meads STW catchment project to reduce phosphorous and also on our growth project for Didcot STW. We would like to have further discussions with Ofwat before the Final Determination about passing other large emerging enhancement projects at Oxford STW and Rye Meads STW through the Large Scheme Gated Process due to the expected cost and uncertainty in the solution.

While we recognise the merits in principle of a gated process, we do not agree with Ofwat's proposal to provide in 2025-30 revenues only for a development cost allowance for our gated SEMD and raw water deterioration schemes worth 6% of forecast project costs, with the remaining balance of allowed costs being held over to an end-of-period RCV adjustment. We strongly disagree with Ofwat's proposal that the logged up RCV adjustment should contain no allowance for the time value of money.

The first of these proposals places avoidable strain on our cashflow at a time when we are already looking at a financing requirement of unprecedented scale. The more Ofwat's decisions create the need for companies to finance investment ahead of cost recovery, the more Ofwat is risking that a company's financeabilty headroom becomes a biting constraint on its ability to deliver for customers and the environment. For example, if delivery requires spend beyond 6% of forecast project costs, financeability considerations may require a pause in delivery to manage headroom. Put simply, where regulatory policy can avoid such a delay it should because this will maximise companies' ability to deliver. As set out in Section 4.1.1, partial funding may also lead to inefficiency by preventing engagement with the supply chain on end-to-end delivery solutions.

[22] PR24-draft-determinations-Expenditure-allowances-to-upload.pdf (ofwat.gov.uk) page 184
[23] RIIO-3 Sector Specific Methodology Decision – Overview Document (ofgem.gov.uk) page 107

The second of these proposals is unduly punitive and violates the long-standing principle that companies should be reimbursed for the financing costs they incur when they use investor capital to finance capital investments ahead of reimbursement by future customers. The use of private finance is not free, and where Ofwat puts in place mechanisms that require its use, the cost needs to be recovered.

Ofwat's 'delivery mechanism' strikes a good balance between Ofwat's desire to assess schemes on a stage basis and any impact on financeability and deliverability by creating a transparent, timely process to unlock cost recovery in-period. Ofwat should adopt this approach across all its gated allowances. This would also have the advantage of streamlining and simplifying Ofwat's in-period processes. In practical terms, this would mean that adjustments to cost allowances are implemented in the year immediately following the completion of Gate 3 requirements.

4.5 Asset Health Improvement gated allowance

4.5.1 The Asset Health Improvement gated allowance provides a way forward to enable and de-risk investment in key areas

We support the inclusion of the Thames Water-specific Asset Health Improvement Gated Process. The proposed £1bn allowance will allow us to improve a number of our asset cohorts in AMP8, including rising mains and service reservoirs. We also agree that our plans to reduce the risk of flooding from trunk mains should pass through this process. As requested, our draft determination response includes the first tranche of projects to be passed through Stage Gate Zero[24] and we continue to work on a programme to prioritise other investment through this process within the timescales expected by Ofwat.

We recognise the need for oversight and stringent assurance requirements, but we also recognise that the process needs to support/enable getting investment to deliver projects on the ground and not get held up in overly burdensome change control processes. The focus must be getting the investment into the assets to deliver benefits for customers. We welcome open constructive dialogue on how the process can be streamlined to achieve this.

We welcome Ofwat's intention to review our Stage Gate Zero submissions and ask for one to have passed Gate One by the final determination. Timely progress through the gated process will help to provide clarity on cost recovery for each scheme, enabling us to focus on delivering these critical works to improve the condition of our assets for the benefit of our customers and the environment.

We recognise the merits of a gated approach in principle to ensure that solutions are worthy of investigation and development, deliver significant and predictable benefits to customers and the environment, and are associated with efficient costs. We suggest the process for unlocking funding developed for the Asset Health Improvement gated process is also used on the Large Scheme Gated process.

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[24] An initial Gate Zero paper for rising mains can be found at TMS-DD-052: Asset Health Improvement Rising Mains Gate 0

4.6 Price Control Deliverables

This section should be read alongside our detailed annex TMS-DD-044 on PCDs, where we further substantiate provide supporting evidence for the summary below.

4.6.1 The draft determination approach to Price Control Deliverables introduces unnecessary downside risk that will impact our ability to finance our plan and deliver key outcomes for the benefit of our customers and the environment

We support Ofwat's intention, with the introduction of Price Control Deliverables (PCDs), to ensure customers only pay for work that is delivered in AMP8. We also welcome the introduction of potential upside at draft determination for the timely delivery of investment subject to PCDs. However, currently the scope of PCDs extends beyond areas in which they would add useful additional incentives, and as currently designed and calibrated, the approach to PCDs in Ofwat's draft determination will introduce excessive downside risk. Without a revised approach, this will impact our ability to attract our ability to attract new equity and finance our plans, creating a risk that the outcomes that matter for our customers and the environment will not be delivered. We provide further representations on Ofwat's overall approach to PCDs in TMS-DD-044 and provide specific comments on the design and calibration of individual PCDs in TMS-DD-038.

Based on Ofwat's draft determination 49% of enhancement expenditure had a PCD associated with it. Below, we set out our key concerns with the draft determination and how these may be addressed by Ofwat:

- **Duplication with statutory obligations:** Ofwat's draft determination applies PCDs to expenditure areas where we already have statutory obligations to deliver projects. PCDs in these areas are therefore disproportionate and create double jeopardy, with financial penalties already applicable for failing to deliver against statutory obligations under separate regulatory regimes. We propose PCDs should be removed where statutory obligations exist – they create unnecessary downside when existing strong incentives are in place to ensure timely delivery of schemes for the benefit of our customers and the environment.
- **Excessive downside risk:** While we welcome the introduction of potential upside for the timely delivery of PCDs, the overall expected distribution of incentives associated with PCDs is skewed to the downside. The draft determination imposes alternative delivery profiles compared to our April 2024 business plan submission, which do not reflect what we consider to be achievable through the detailed bottom-up design of our plan. The draft determination also applies significant reductions to our proposed enhancement expenditure. Together, these interventions will make it extremely challenging for us to deliver against Ofwat's proposed PCDs. Combined with the asymmetry of rewards/penalties (for example, rewards for early delivery are quarter of the penalties for late delivery), Ofwat's approach creates excessive downside skew with no clear benefit for customers or the environment. We propose that the level of financial penalties is reduced by Ofwat to achieve a more balanced and achievable regulatory package.
- **Lack of flexibility in delivery and innovation:** The widespread use of PCDs in Ofwat's draft determination with annual delivery targets will limit the opportunities for innovation and collaboration with industry partners in AMP8. Granular output targets with associated time-based incentives hampers our ability to amend investment plans, for example to embed

innovative approaches for the benefit of our customers and the environment. We propose that, where the PCD regime is retained, it should be amended to allow for changes to output targets where companies can demonstrate this will have no material adverse impact on customers or the environment.

5. Draft determination response on outcomes

This section should be read alongside our detailed annex TMS-DD-039, where we substantiate and provide supporting evidence for the summary below.

5.1	Industry-wide considerations
5.1.1	Median PCLs should be recalculated on the basis of actual AMP7 outturn performance to create stretching yet credible targets for AMP8
5.1.2	There is scope to revisit the calculation of some ODI components, so that ODI rates reflect proportional rewards and penalties and create incentives better aligned to customer priorities
5.2	Thames Water specific outcomes considerations
5.2.1	To allow us to deliver more for our customers and the environment in AMP8, we have proposed a range of Thames Water specific changes to set PCLs at levels that are challenging but achievable
5.3	Impact of our proposed mitigations
5.3.1	Without our proposed mitigations, we would expect to incur a £1.6bn ODI penalty across water and wastewater ODIs in AMP8, significantly undermining our ability to deliver our ambitious business plan for the benefit of our customers and the environment

We have listened carefully to Ofwat's feedback on performance and its proposals for PR24. We have been through a rigorous process to interrogate our plans again and stretched ourselves to deliver more wherever we can.

We are broadly supportive of Ofwat's water-related outcomes package in many areas, reflecting that over recent years we have materially improved the performance of our water services. However, there are certain PCs where we still have major concerns around the targets set by Ofwat as they appear unrealistic and unachievable. In Sections 5.1 and 5.2, we set out alternative approaches for water supply interruptions, leakage, per capita consumption (PCC), business demand and biodiversity.

In wastewater, many of the targets set by Ofwat are simply unachievable and unnecessarily punitive, exposing us to disproportionate penalties. Since we cannot achieve these PCs, nor avoid the penalties, the impact is to skew the expected distribution of returns to the downside, which is not reflected in the allowed return. This in turn will make it harder for us to attract the equity we need to finance our plan (using both equity and debt) and deliver our ambitious goals for customers and the environment. We have therefore proposed alternative PCLs for various wastewater-related PCs including internal sewer flooding, external sewer flooding, total pollution incidents, serious pollution incidents and discharge permit compliance.

Where relevant, we have also proposed alternative ODI rates for both water and wastewater-related PCs to ensure all available data is accounted for, appropriate benchmarks are used and accurate levels of risk are reflected.

As set out below, and in detail in our supporting technical response, our representations are focused on addressing areas where we consider the Ofwat challenge to be unrealistic, undeliverable, and/or not in the interests of our customers.

5.1 Industry-wide considerations

5.1.1 Median PCLs should be recalculated on the basis of actual AMP7 outturn performance to create stretching yet credible targets for AMP8

We agree that Ofwat should set PCLs at the median level across the industry, rather than at the industry upper quartile, as it has done in its draft determination. But it is important that Ofwat calculates the median based on industry outturn at the end of AMP7, rather than assuming companies will meet their PR19 PCLs. This assumption does not recognise actual performance to date, which demonstrates just how challenging the PR19 PCLs are.

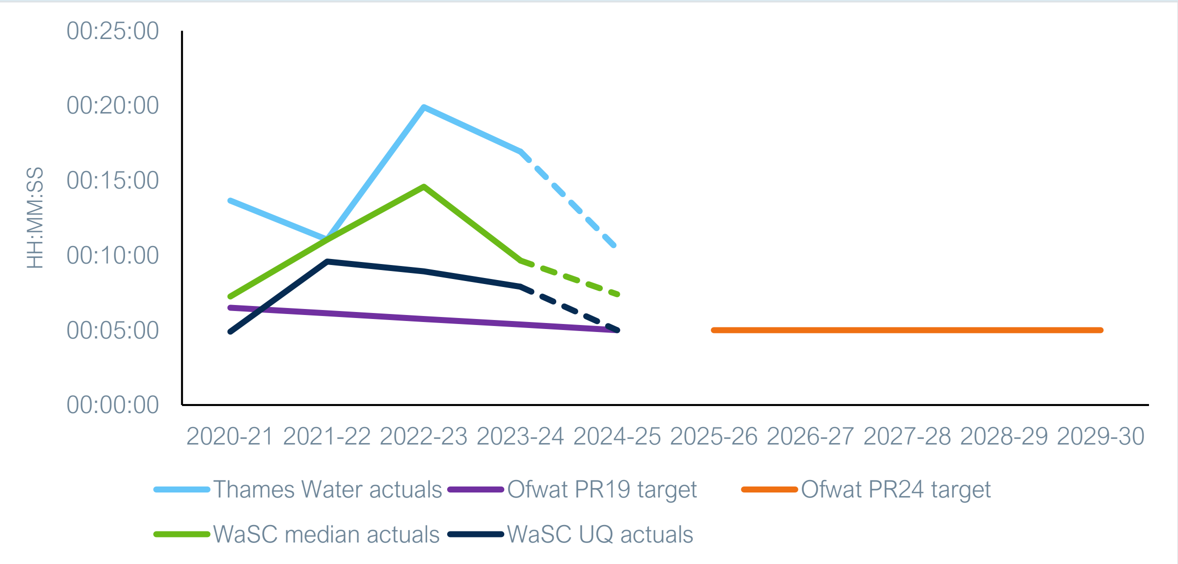
For example, across common performance commitments, only one company is in a net outperformance position to date in AMP7. This evidence suggests at the industry level, 2024/25 PCL targets are unlikely to represent a realistic forecast of outturn performance. In calculating the median based on this assumed outturn, Ofwat has in effect layered an additional performance challenge on companies, which does not reflect the actual AMP8 starting position and so represents an unreasonable stretch.

Example: Water Supply Interruptions (WSI) and PCL setting for AMP8

As evidenced in our outcomes technical appendix (TMS-DD-039), there have been significant differences between the performance of WoCs and WaSCs on WSI during AMP7, reflecting the different operating environments for each group (for example, some small WoCs already have a high degree of resilience built in to their networks). All WoCs, except for South East Water, are expecting to hit the PR19 PCL of 5 minutes.

Figure 6 below uses WSI to illustrate the flaws associated with setting PR24 PCLs on the assumption that PR19 PCLs will be met, focusing on the performance of WaSCs given the performance differences outlined above. Median WaSC performance is forecast to outturn above at 7 minutes 24 seconds in 2024/25, above the 5mins target. Whilst upper quartile WaSC performance in 2024/25 is forecast to meet the target, as explained in our outcomes technical appendix this is based on unrealistic forecast from several companies who expect to hit this target whilst significantly underperforming across AMP7 to date.

Figure 6: Comparison of WSI actual and forecast performance to Ofwat targets



The proposed PR24 PCL at draft determination of 5 minutes throughout AMP8 assumes that this level of performance has already been achieved in the current price control and can be maintained. This target does not reflect the best available evidence for the industry overall and assumes an unrealistic step change for most WaSCs in the final years of AMP7.

Looking beyond the approach to the AMP8 starting position, we acknowledge that Ofwat has taken steps to make certain targets more achievable by setting them based on the median of company submissions instead of upper quartile. However, these median-based targets have been calculated using companies' business plan submissions, which often contain ambitious and stretching plans for AMP8 that are not likely to be achieved. Combined with the assumption that PR19 PCL targets are met by the end of AMP8, the use of AMP8 business plan submissions creates an unrealistic stretch for many performance commitments.

Our outcomes technical appendix (TMS-DD-039) includes the full supporting evidence and rationale for our proposed amendments to the draft determination, correcting PCLs for AMP7 outturn performance creates challenging but achievable PCLs for the following performance commitments.

- **Water supply interruptions:** We propose that Ofwat uses a WaSC-only upper quartile target based on actual historical performance from 2016/17 onwards, to set an AMP8 PCL of 00:07:31. This approach addresses the challenges with assuming the end of AMP7 PCL of 00:05:00 is achieved, as outlined in our previous example. We propose the use of historic upper quartile to set a stretching incentive – most WaSCs have not achieved this target in recent years.
- **Internal sewer flooding:** We propose an amended baseline for 2024/25 of 1.82, based on the average of the best 5 out of the last 8 years APR data. We then propose an end of AMP8 target of 1.45, based on the upper quartile of performance of the best 5 out of the last 8 years APR data. This represents a greater % improvement across AMP8 than proposed by Ofwat in its draft determination, delivering significant stretch for the benefit of our consumers.
- **Total pollution incidents:** We propose a 30% reduction over AMP8 (in line with WISER requirements) from an updated start of AMP8 baseline position of 29.64, based on the median performance of all companies across the period 2016/17 to 2023/24.

In Section 5.2, we outline where further company specific adjustments are required to reaching stretching but credible PCLs in AMP8.

5.1.2 There is scope to revisit the calculation of some ODI components, so that ODI rates reflect proportional rewards and penalties and create incentives better aligned to customer priorities.

The ODI rates in Ofwat's draft determination have changed substantially from the indicative ODI rates published in August 2023. In our outcomes technical appendix, we propose and justify several amendments to better align the methodology to the intent of the PR24 Final Methodology. Cross cutting amendments in our proposals include:

- **2023-24 performance data:** ODI rates should be updated to include the latest performance data that is now available to Ofwat. This approach is in line with the CMA's approach at PR19 and ensures Ofwat's calibration captures the most accurate view of current performance.

- **Industry-wide median unit incident rate:** Companies with large RCVs should not be penalised for ODI rate mitigations put in place to protect small RCV companies. Ofwat should therefore continue to calculate ODI rates for large companies based on an industry-wide median unit incident rate, while at the same time estimating ODI rates for small RCV companies separately. Without this amendment, ODI rates for large companies are disproportionately high relative to the scale of consumer or environmental benefit or detriment caused.

5.2 Thames Water specific outcomes considerations

5.2.1 To allow us to deliver more for our customers and the environment in AMP8, we have proposed a range of Thames Water specific changes to set PCLs at levels that are challenging but achievable.

We are broadly supportive of the package of water-related outcomes. As a business, we are challenging ourselves to be more ambitious than ever before to meet the targets in our draft determination. For example, we have been challenged to submit more ambitious targets for leakage which we do. We expect to achieve a close to neutral ODI position across AMP8 across our water ODIs if our proposed mitigations are accepted in full and we deliver the stretching targets in our ambitious plan.

In wastewater, we have challenged ourselves to be more ambitious. However, even with an optimistic view of our future performance, the draft determination ODI package includes wildly unrealistic targets for us to achieve and exposes us to a net penalty of approximately £1.6bn in water and wastewater, if the draft determination remains unchanged. A large portion of this net penalty is driven by the expected £1.1bn penalty for external sewer flooding, for which we request Ofwat to consider our resubmitted data.

The financial exposure in our draft determination outcomes package is unduly high and we consider that Ofwat's risk analysis materially understates the true downside case and does not reflect the risk profile we face in practice. The risks are not symmetrical and expose us to penalties which are effectively unmitigated.

Therefore, in addition to the industry wide considerations outlined in Section 5.1, we make Thames Water specific representations in the areas where we consider Ofwat's challenge to be unrealistic, undeliverable and/or not in the interests of our customers. Our key positions are summarised in Table 6 below, with full information on the underlying evidence supporting all our positions provided in the outcomes technical appendix (TMS-DD-039).

Table 6: Our Thames Water specific positions on outcomes

	Our position
Caps and Collars	• **Overall approach:** Ofwat has substantially reduced the use of caps and collars compared to PR19, whilst increasing ODI rates and introducing tougher PCLs. This skews our expected distribution of returns away from Ofwat's industry-wide WACC. Beyond a certain level, negative skew will make it unduly hard for us to attract new equity and therefore finance our plan, which would not serve our customers, communities or the environment well as outcomes would be delivered late or not at all. We therefore propose caps and collars are included for all PCs to mitigate against this risk. Some specific examples are provided below: • **External sewer flooding:** This is a new PC for us – a cap and collar should therefore apply to be consistent with regulatory precedents. • **Compliance based PCs** (including discharge permit compliance, compliance risk index and serious pollution incidents): These areas are subject to statutory obligations with financial consequences. A collar is a necessary protection from unbounded double jeopardy from two regulatory regimes each with severe sanctions.
Deadbands	• **Per capita consumption (PCC)**: We propose a conditional deadband, where if a government-led initiative intending to drive demand reduction is not introduced, the deadband applies. This removes the risk of penalties applying in a situation whereby targets have been missed due to Government policy decisions, rather than actions taken by us. It is not in the interest of consumers or the environment for penalties to apply in these situations – such penalties would create unnecessary financial pressures that may delay the delivery of outcomes. • **Serious pollution incidents:** As outlined in our outcomes technical appendix, we support the need for a zero target for serious pollution incidents, and will do everything in our control to work towards this target. However, even with our best endeavours, our outturn performance is unlikely to be zero, and cannot be less than zero. Setting the PCL at zero contributes to the skewing of the expected distribution of returns to the downside, which impacts our ability to attract equity and to finance and therefore deliver our ambitious plans for customers and the environment.
Glidepaths	• **Leakage:** We propose a glidepath from our forecast AMP8 starting position to our proposed end of AMP8 target. This accounts for amendments to our forecast end of AMP7 outturn position, following the impact of extreme weather events in 2022/23. The glidepath will allow us to recover the leakage reduction shortfall over AMP8. Under our proposal, we would achieve a 119.33 Ml/d reduction to 407.7 Ml/d annual average leakage at 2029-30. • **Total pollution incidents**: In addition to the corrected baseline described in Section 5.1.1, we propose using an alternative baseline to set the glidepath. This alternative glidepath should be based on evidence of actual performance rather than the target set by Ofwat at PR19.

Targets / Methodology	• **Per capita consumption (PCC):** Ofwat's proposed PCC targets during the early years of AMP8 have not adequately accounted for the effects of Covid-19 in AMP7 and the continued effects of increased remote working through AMP8, which has been most pronounced in London and South East[25]. We propose a revised approach in our outcomes technical annex to provide a stretching yet credible starting point for AMP8. Our proposed PCL results in a 7% PCC reduction by 2029-30 (135.1 Ml/d)[26]. • **External sewer flooding**: we propose a revised PCL based on restated performance data that we have submitted (alongside further assurance) to Ofwat on the 1st August 2024. Using our uncorrected data to set the PCL would result in a penalty in excess of £1bn over AMP8, even if we materially improve our performance by reducing the number of incidents by 26%. Such a level of penalty would significantly undermine our ability to deliver our plan for the benefit of our customers, communities and the environment. • **C-MeX**: We propose the incentive threshold is adjusted to 0.25% of appointee RoRE. Without this adjustment, C-MeX will be around twice as high powered as other high consumer priority PCs for water and wastewater. As set out in our outcomes technical appendix, the draft determination disproportionately places emphasis on C-MeX, which is in part a measure of general perception driven by marketing, rather that the substantive outcomes customers have told us matter most to them. • **D-MeX and BR-MeX:** We propose Ofwat use the water RCV, to better reflect the nature of the activities being surveyed and to align with customer priorities (as outlined for C-MeX).
Specific Exclusions	• **Severe water supply interruptions**: We agree with Ofwat's re-consideration of severe water supply interruptions, potentially looking at tools beyond performance commitments to incentivise companies to further mitigate the impact of large events and associated outages. We will engage constructively with Ofwat on how best to incentivise companies to further mitigate severe interruptions and outages. At present, we consider that no additional incentive is needed as we are already strongly incentivised through the existing incentives regime.

We accept that Ofwat needs to put in place incentives to encourage companies to deliver more for customers and the environment and penalise them if they deliver less than the levels of performance customers are actually funding. But it is important that Ofwat's incentives are calibrated appropriately. PCLs should be set at a challenging but achievable level and financial penalties should be proportionate, enough to create an incentive for the company to deliver but not so much as to expose the company to risk it cannot manage or bear.

In particular, Ofwat must take care to ensure that downside risk exposure through its PCLs and ODIs is not so great as to create a downside risk that undermines investibility and a company's ability to raise the equity and debt it needs to finance its plan and deliver the outcomes it has proposed for customers and the environment. In Section 6 on risk and return which follows, we

[25] https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/homeworkingintheukregionalpatterns/2019to2022

[26] 7% is the 3-year percentage reduction from 2019-20 (using SUP1A population data) in the Revised August 2024 Plan and 135.1 Ml/d is the 3-year rolling average.

consider the impact of ODI downside risk alongside other drivers of risk on our overall financeability and investibility.

5.3 Impact of our proposed mitigations

5.3.1 Without our proposed mitigations, we would expect to incur a £1.6bn ODI penalty across water and wastewater ODIs in AMP8, significantly undermining our ability to deliver our ambitious business plan for the benefit of our customers and the environment

Section 1 of our outcomes technical appendix (TMS-DD-039) provides a breakdown of our expected ODI position for each individual PC using two scenarios:

1. **Unmitigated:** In this scenario, the Ofwat draft determination PCLs and associated positions on ODIs are assumed to hold and are compared to our revised ambition as set out in out draft determination response.
2. **Mitigated:** In this scenario, our revised approaches to PCLs and additional components of ODI calibration (as summarised in this section and in detail in our outcomes technical appendix) are assumed to be accepted.

If the proposals in our PR24 draft determination response are accepted by Ofwat as sufficiently stretching, we would anticipate achieving a broadly neutral ODI position (subject to delivery in line with our proposals). As outlined in this section, Ofwat's draft determination position is unachievable in many places and introduces significant downside risk to the distribution of unexpected returns. Left unmitigated, as shown in Table 7 below, the draft determination Is expected to generate a penalty of £1.6bn across water and wastewater performance commitments in AMP8.

Table 7: AMP8 ODI penalties, before and after mitigations

PC area	AMP8 Penalty (unmitigated)	AMP8 Penalty (mitigated)
Water	(£90m)	(£17m)
Wastewater	(£1,498m)	(£190m)
Measures of Experience* (All)	(£429m)	(£190m)
Total	**(£2,017m)**	**(£397m)**

* Measures of Experience Penalty figures based on maximum potential exposure across C-MeX, D-MeX and BR-MeX across AMP8

Without mitigations, the negative skew in expected penalties will make it unduly hard for us to attract new equity and therefore finance our plan, resulting in outcomes being delivered late or not at all and resilience being compromised. It is in the interest of all stakeholders to achieve a stretching yet achievable outcomes package that enables us to focus on delivering what matters most for customers and the environment.

After our proposed mitigations, we would still anticipate incurring an overall water and wastewater net penalty across AMP8 close to £207m, primarily driven by wastewater PCs. We understand our need to improve and to catch-up performance. Even with an expected overall net penalty, we will still have a strong incentive to close this gap to zero and return to positive territory. In addition, we are still exposed to a maximum penalty exposure of close to an additional £190m after our proposed mitigations across customer experience metrics.

Disproportionate penalties will not have the desired effect of making the improvement more likely or faster, indeed quite the reverse.

In Section 6, we incorporate the impact of our revised outcomes package on overall risk levels. This downside skew on our expected outcomes is one reason for proposing a higher WACC than in Ofwat's draft determination. This helps significantly to improve the overall investibility of our PR24 package.

6. Draft determination response on risk and return

6.1	**Allowed return**
6.1.1	Ofwat's allowed return must be sufficient to attract new equity
6.1.2	We echo the view of the whole water industry that there are factors that differentiate PR24 from other price controls, and require a higher industry cost of equity
6.1.3	Ofwat's cost of debt estimate risks penalising companies with large investment programmes
6.1.4	Rigorous cross-checking is necessary to reconcile Ofwat's allowed return method with market benchmarks, including alignment with the approach taken by other regulators
6.1.5	We have estimated a WACC which better reflects real-world financing costs which is a more appropriate allowed return
6.2	**Financial resilience**
6.2.1	We are committed to securing greater financial resilience but will need to balance the need for new equity injection to finance delivery of our plan with the pace of de-gearing.
6.2.2	Redistributing funds towards de-gearing in parallel to restricting dividend yields presents significant downside risk and disincentives to investors
6.3	**Balance of risk and return**
6.3.1	Our assessment of RoRE risk range demonstrates a strong downside risk profile
6.3.2	The risk inherent in our draft determination is excessive. To bring an acceptable balance to risk and return, changes are needed at both industry level and in our specific price control arrangements
6.3.3	Uncertainty mechanisms are critical to manage ongoing risks
6.3.4	We additionally propose a Turnaround Oversight Regime Aggregate Sharing Mechanism to manage risk and support investibility enabling delivery and turnaround
6.3.5	Following our proposed refinements to the price control package our RoRE analysis is much closer to zero (but still negative)
6.4	**Financeability**
6.4.1	Ofwat's draft determination is not financeable on a notional basis
6.4.2	Our Integrated Business Plan would be financeable on the basis of an Ofwat final determination that included the changes we seek in this Draft Determination response. The plan put forward in this response would require £3.3bn equity to deliver our investment plans, and to restore our credit metrics

6.1 Allowed return

This section should be read alongside our detailed annex (TMS-DD-040) on allowed return, where we substantiate and provide supporting evidence for the summary below.

6.1.1 Ofwat's allowed return must be sufficient to attract new equity

In developing our final determination, Ofwat must have regard to key statutory objectives, including the consumer and resilience objectives, as well as its financing and growth duties. Ofwat must, in particular, secure that water companies can finance the proper carrying out of their statutory functions (including through securing reasonable returns on the capital they deploy).

A pre-requisite for the delivery of our ambitious plan for our customers, communities and the environment is our ability to finance the investment programme. This rests on our ability to attract substantial new equity into our business. This will be key also to our ability to issue new debt. To do this, we will need to show equity and debt investors that Ofwat's sector-wide allowed return is in line with the industry cost of capital and competitive with comparable assets in the UK and internationally.

PR24 is taking place against a very different backdrop from previous price reviews. Starting from around 2022, wider financial market conditions have completely changed from the 'lower for longer' environment experienced at PR14 and PR19, where Ofwat was able to reduce significantly its allowed return on equity and allowed cost of debt. Long-term interest rates now stand 3-4 percentage points higher than they were at the start of the regulatory period after central banks around the world have normalised monetary policies. This, in turn, has pushed up required returns across all asset classes.

The question now is therefore not how best Ofwat can ensure that customers do not pay over-sized returns, but rather how Ofwat should be adapting the old PR19 methodologies to a world in which interest rates are seen as being 'higher for longer'. This is imperative if Ofwat is to balance its various duties, including primary ones, such as the financeability duty, the resilience objective and the consumer objective, as well as its new growth duty.

AMP8 is associated with an unparalleled step-up in investment, material increases in systematic risk, and substantially more challenging financing market conditions. We require c.£3.3bn of new external equity, as well as substantial new debt, to finance and therefore enable the scale of improvement our customers are seeking in AMP8. As such we must be able to offer investors the opportunity to earn returns that are commensurate with the returns that can be earned on investments of similar risk elsewhere.

Ofwat must also recognise that this is a critical time for us specifically. The risk inherent in our draft determination is far greater than for an average water company, including for totex, C-MeX and ODIs such as internal and external sewer flooding. This risk is exacerbated in the context of factors outside our control which impact our region (see Annex A in this document) that must be considered in calibration of targets, rates, cost allowances and allowed returns.

Risk exposure, unsurprisingly, is a much bigger issue for investors now than it was five years ago. Despite a positive start to the 2020-25 period and a mostly smooth journey through the covid pandemic, water company profitability has dropped off markedly during years 2, 3 and 4 of AMP7. The combination of an input price shock, unforeseen demands from stakeholders for additional investment and a realisation that the common performance commitment levels that Ofwat set at PR19 were too challenging has left all companies overspending and only two companies avoiding net performance penalties between 2020-21 and 2023-24[27]. Companies have also had to deal with much greater public scrutiny and press attention than in the past, much of which has betrayed fundamental misunderstandings about water industry economics and economic regulation.

[27] Oxera analysis of Ofwat's Monitoring Financial Resilience datasets and company APR data, submitted as part of Water UK draft determination response

Unless these areas are addressed, the investibility of our plan will be put into significant danger. This risk is already being recognised by financial market participants – Moody's Ratings have stated that "In light of a challenging draft determination, as published by Ofwat on 11 July 2024, we see elevated risk that existing or future equity investors may view the proposed risk and return profile as not sufficiently attractive to provide the sizeable equity requirement… in the context of the proposed determination."

On 14 August, Moody's Ratings again state that the draft determination "increases the risk that sector returns may not be enough to attract the equity funding that the companies need to support increasing investment. If the draft determination is adopted unchanged we could lower our view of the regulatory framework's stability, predictability and supportiveness."[28]

6.1.2 We echo the view of the whole water industry that there are factors that differentiate PR24 from other price controls, and require a higher industry cost of equity

In its PR24 draft determination, Ofwat expects the industry to raise £7bn of new equity to fund investment. The actual equity needed by water companies is likely to be higher - in a note to investors, Barclays Research[29] estimated there would be a further £30bn of equity in the sector by 2030, with up to £10bn of this as primary (compared to Ofwat's estimate of £7bn). Either amount is far higher than at any previous price control. Setting the appropriate cost of equity to attract new equity as well as remunerate existing equity has never been more important.

Below, we compare Ofwat's proposed return on equity to (i) the return that would emerge from a straight roll-forward of the Competition & Markets Authority's (CMA's) PR19 calculations, and (ii) Ofgem's July 2024 RIIO-3 range for the energy networks' allowed return. The draft determination return on equity is approximately 50 basis points lower than the CMA's rolled forward calculation and up to 100 basis points lower than Ofgem's proposals for the energy network's allowed return.

As discussed in the remainder of this Section, we are submitting a new independent report from the consultants KPMG alongside this response which provides new and updated material on the reasonable estimate of WACC for the water sector. KPMG's overall estimate of the cost of equity based on data as at June 2024 is also included in the Table 8 below.

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[28] Moody's Ratings (2024). *Ofwat's draft determination increases sector risk.*
[29] Barclays (5 August 2024) *Breaking the water cycle – no longer so positive.*

Table 8: Allowed return on equity

Area	Ofwat PR24 DD	CMA PR19 roll-forward*	Ofgem RIIO-3	KPMG estimate
Gearing	0.55	0.55	0.55	0.55
Risk-free rate	1.43%	1.93%	1.18%	1.55% to 2.22%
TMR	6.29% to 6.87%	6.81%	6.5% to 7.0%	6.75% to 6.93%
Unlevered beta	0.26 to 0.29	0.29	0.26 to 0.36	0.28 to 0.35
Debt beta	0.1	0.075	0.075	0.1
Equity beta	0.57 to 0.64	0.63	0.57 to 0.79	0.63 to 0.74
Aiming up		0.25%	-	0.15% to 0.75%
Cost of equity	4.19% to 4.88% point: 4.80%	5.28%	4.2% to 5.8%	4.97% to 6.48%

Notes: *We update the CMA's latest risk-free rate calculation to incorporate the latest gilt market and iBoxx readings. We also convert to a 55% gearing figure.

A closer look at the inputs into the calculations shows Ofwat taking a tougher stance than the CMA and/or Ofgem on each of the risk-free rate, TMR and beta:

- Risk-free rate (RFR). Ofwat has set the RFR by reference to 20-year index-linked gilts (ILGs). This is despite clear steer from the CMA at PR19 that it is inappropriate to use ILGs as the sole proxy for the RFR. The CMA identified a 'specialness' to these bonds (such as their superior collateral vs other assets) which makes them more valuable to investors and, hence, pushes their yield down below the true risk-free rate in the economy. Ofwat's continued confidence and use of ILGs is unwarranted in the presence of clear gilt market oddities.
    - *Our position:* We are submitting a new independent report from the consultants KPMG alongside this response which provides new and updated material on the alternative ways that there are to estimate the risk-free rate of return. The report identifies that the theoretical literature provides reason to think that index-linked gilt yields will understate the CAPM risk-free rate by up to 29 basis points. KPMG also provides quantitative analysis of sterling instruments that suggests under-estimation of up to 77 basis points.
- Total Market Return (TMR). At draft determination, Ofwat accepted that too much weight was placed on global data in its Final Methodology. We welcome this small technical update. However, the mid-point of Ofwat's PR24 range is more than 20 basis points lower than the CMA's preferred estimate of 6.81%. And Ofwat's range is noticeably lower than Ofgem's range of 6.5-7.0%. A key question for Ofwat when it assembles its final determination will be how far Ofwat needs to depart from a historical TMR benchmark. A long-term 'average' will be a good predictor of the current, real-world TMR in 'average' market conditions. But we are not currently at a neutral point in the interest rate cycle. The current outlook is for interest rates to stay 'higher for longer', which means that the available returns on all types of financial asset, including other equity investments, are likely going to be above historical benchmarks for the foreseeable future.

    - *Our position:* It is vital that Ofwat makes allowance somewhere in its final determination for a TMR that is higher than the draft determination range. KPMG's approach is to make this allowance in an explicit 'aim up' at the end of the cost of equity calculation. In our view, it might be more transparent and send a clearer signal of intent to the markets for Ofwat to make the required adjustment directly within the TMR line of its calculations. Ofwat should provide for an additional 25 to 50 basis points of equity return to avoid a misalignment between a long-term average TMR and equity investors' actual expected stock market returns.
  - Beta. Empirical estimates of beta are, by definition, backward-looking and pick up investors' perceptions of riskiness in previous regulatory periods. The 2025-30 regulatory period contains new, incremental challenges for water companies and their investors, including most notably a bigger capital programme and an accompanying increase in cost risk. Ofwat's wholly backward-looking beta calculations are not aligned with forward-looking risk. The risk outlook for the water sector has deteriorated, yet Ofwat has reduced the asset beta from 0.3 in PR14 to 0.27 in PR19 and 0.25-0.29 in PR24.
    - *Our position:* KPMG's report suggests a number of technical improvements that Ofwat can make to its analysis, such as including a non-zero weight to Pennon's beta and including National Grid in the beta comparator set. KPMG's proposed beta range is 0.28 to 0.35. This aligns to Ofgem's RIIO-3 beta for companies with fundamentally the same risk characteristics, and hence would serve to ensure that there is no material difference in the returns that investors can obtain by putting their money into water companies compared to other similarly regulated businesses.
- Aiming up: We agree with Ofwat's proposal to pick a point value from the top end of its estimated cost of equity range. However, aiming up is not a cure for methodological errors identified in the preceding sub-sections; it has a solid rationale in its own right – in the presence of estimation uncertainty it stops a regulator from setting the allowed return too low, disincentivising both company investment and equity investment. With the risk-free rate, TMR and beta all lower than CMA and Ofgem values, all that Ofwat's aiming up achieves is to paper over some, but not all, of the systematic under-estimation in its CAPM calibrations.
    - *Our position:* KPMG recommends that the required amount of aiming up from a central case cost of equity estimate is 0.15% to 0.75%. As noted in the section on the TMR, we consider that around half of this allowance is required to correct for the use of a long-term average TMR value. It follows that it is only by going to the top end of the range that Ofwat can support investment and investor confidence. Furthermore, the downside skew in our draft determination warrants further aiming up.

6.1.3 Ofwat's cost of debt estimate risks penalising companies with large investment programmes

The cost of debt is more readily observable than the cost of equity. This means that Ofwat can rely more strongly on issuance data. Our position on the cost of embedded debt, new debt, weight for new debt and issuance costs is set out below.

Table 9: Allowed cost of debt

	Ofwat DD	Our response
Cost of embedded debt	2.46%	2.76%
Cost of new debt	3.36%	3.96%
Weight for new debt	26%	26%
Issuance and liquidity costs	0.15%	0.15%
Cost of debt	2.84%	3.22%

- **Cost of embedded debt.** We acknowledge Ofwat's intention of aligning embedded cost of debt allowances to average industry debt financing costs. We do not consider that an index-led cross check adds value to Ofgem's work on embedded debt. There is no 'right' way of picking either a start date for a trailing average iBoxx calculation or the weights that should be given to individual years in the sample. As a consequence, an index-led cross-check at best gives a very wide range of plausible values and at worst enables a user to create a justification for a number they have already decided is the correct number.
  - *Our position:* We therefore submit that Ofwat's final determination embedded debt costs allowance should be set in line with actual industry mean/median interest costs, inclusive of all of the instruments that large companies have used to raise debt in the period up to 31 March 2025. We use a placeholder value of 2.76% in our re-estimation of the WACC.
- **Cost of new debt.** It is noticeable that the evidence that Ofwat relies upon has a cut-off date of 31 March 2023 and that Ofwat has not yet had the opportunity to consider evidence from the debt issued by water companies since 1 April 2023. We propose several tweaks to better align Ofwat's proposed benchmark (the average of the iBoxx A and BBB £ non-financial 10+ year indices) to the industry's cost of debt.
  - *Our position:* Considering the evidence provided, we recommend that Ofwat provide for a 60 bps uplift to the iBoxx index for the duration of the 2025-30 regulatory period. We also note this is similar to the 55 bps figure used by Ofgem in ED2.
- **Share of new debt.** Ofwat's draft determination uses industry-average weights for the cost of embedded debt and new debt of 74% and 26% respectively. Given the growing gap between the cost of embedded debt and the cost of new debt, it is important that Ofwat updates these weights to reflect the size of the capital programme that is factored into its draft determination. If a company's modelled mix of embedded and new debt is materially different from the industry average, Ofwat should consider applying a company-specific set of weights. This will ensure that the company is not disadvantaged by taking on a relatively high amount of new investment.

6.1.4 Rigorous cross-checking is necessary to reconcile Ofwat's allowed return method with market benchmarks, including with the approach taken by other regulators

Ofwat's approach to calculate allowed returns is carried out on the basis that it allows the company with a notional capital structure to recover efficient financing costs over time. While we acknowledge that this approach has been used for the past 25 years, acting in line with its statutory duties, Ofwat cannot ignore current macroeconomic and financing conditions in AMP8.

Indeed, other regulators, like Ofgem, have already recognised that there needs to be a shift in the approach to assessing financeability. In the RIIO-3 Final Methodology, Ofwat have introduced the notion of "investability" as part of the financeability assessment.[30]

Given anticipated material increases in systematic risk, attributed to the projected unparalleled step-up in capital intensity, cost of equity estimates based solely on historical data from the water sector could plausibly lead to a significant underestimation of risk during 2025-30 and beyond. Rigorous cross-checking is therefore necessary to reconcile Ofwat's method with a real-world position, including alignment with the approach taken by other regulators.

Ofwat's 4.8% CPIH real return on equity converts to a nominal, all-in return of approximately 6.8%. Table 10 identifies the returns that investors could have locked in during the month of July 2024 on other investments.

Table 10: Available returns for investors

	July 2024
20-year gilts	4.6%
A rated corporate 10+ year bonds	5.4%
BBB rated 10+ year corporate bonds	6.0%
Severn Trent Water 14-year bond	6.0%
South West Water 17-year bond	6.4%

Investors that put money into water companies as equity capital take on far more risk than they do if they opt for any of these alternative homes for their money. Even a cursory look at the table therefore makes it clear that the draft determination simply does not contain a sufficient amount of return to persuade a rational investor to choose risky equity investment over the alternative, safer and much less risky ways of earning returns in the range of 5-6% per annum.

The same point can also be made about Ofwat's proposed allowance for the cost of new debt. Ofwat assumes in its draft determination that companies should be able to borrow at roughly the mid-point of the iBoxx A and BBB benchmarks. As at July 2024, this set a benchmark of approximately 5.7%. Severn Trent and South West Water raised debt in July 2024 at costs of 6.0% and 6.4% respectively. These two companies – specifically the two companies with an 'outstanding' grade in Ofwat's PR24 business plan assessment – therefore make it plain that this is not a realistic proposition, and especially not on an industry-wide basis. In light of this

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[30] Ofgem (2023). *RIIO-3 Sector Specific Methodology Consultation – Overview Document.* Paragraph 2.35. Available here.

evidence, we consider it reasonable that Ofwat should provide for a 60 basis points uplift to iBoxx for the duration of the 2025-30 regulatory period.

6.1.5 We have estimated a WACC which better reflects real-world financing costs which is a more appropriate allowed return

Table 11 brings together our estimates on the cost of equity and the cost of debt into an overall calculation of the WACC. We take the point estimate near the upper bound of 4.6% as the current best available estimate of our required return over the period 2025-30. This point estimate is higher than the 4.25% return that we included in our business plan due to: (i) changes in market data; (ii) an observable increase in the industry's cost of debt since summer 2023; and (iii) a deterioration in the industry's perceived risk profile. Our choice of point estimate of 4.60% is based explicitly on our testing of financeability, investibility and financial resilience, and asymmetry in expected outcomes, which we summarise below, and discuss in detail in the risk and return technical appendix (TMS-DD-040).

Table 11: Cost of capital for Thames Water

	Ofwat DD	Thames Water response
Gearing	0.55	0.55
Cost of embedded debt	2.46%	2.76%
Cost of new debt	3.36%	3.96%
Weight for new debt	26%	26%
Issuance and liquidity costs	0.15%	0.15%
Cost of debt	2.84%	3.22%
Risk-free rate	1.43%	1.55% to 2.22%
Expected market return	6.29% to 6.87%	6.75% to 6.93%
Unlevered beta	0.26 to 0.29	0.28 to 0.35
Debt beta	0.1	0.1
Equity beta	0.57 to 0.63	0.63 to 0.74
Aiming up	-	0.15% to 0.75%
Cost of equity	4.19% to 4.88% point: 4.80%	4.97% to 6.48%
Weighted average cost of capital	3.72%	4.01% to 4.69%
Retail margin adjustment	0.06%	-
Allowed return on the RCV	**3.66%**	**4.01% to 4.69%**
Point estimate of allowed return		**4.60%**

6.2 Financial Resilience

6.2.1 We are committed to securing greater financial resilience but will need to balance the need for new equity injection to finance delivery of our plan with the pace of de-gearing.

At draft determination, Ofwat expressed its view that gearing levels exceeding 70% are not consistent with the need for a water company to meet the requirement of maintaining long-term resilience. While Ofwat has chosen not to apply the Gearing Outperformance Sharing Mechanism (GOSM), it considers that the 70% threshold has continuity with the GOSM policy position and has one-third less equity than the notional structure to act as a buffer. Our business plan outlines a proposed AMP8 average gearing of 74%.

Achieving Ofwat's desired gearing level would require us to replace long-term debt with further equity through a de-gearing process. This carries a major opportunity cost in diverting equity that is otherwise critical to financing our plan, particularly investment for enhancements. Our already weighty equity injection requirements are therefore directly correlated to the extent to which Ofwat require us to de-gear.

The CMA has previously found limited evidence that high levels of gearing led to benefits available to share with customers.[31] In PR24, Ofwat have also introduced a number of licence conditions that address financial resilience. Given this context, we consider that Ofwat's introducing of a de-gearing expectation at the expense of deploying new equity to finance the delivery of our plan would be to the detriment of our customers and the environment.

Ofwat has stated that it proposes to provide companies with adequate time to amend and strengthen capital structures and welcome views on what appropriate timeframes may be. We are committed to securing greater financial resilience but will need to balance the requirements to finance the delivery of our plan with the pace of de-gearing. Our priority for AMP8 must be on using new equity to deliver our plan and turn our business around and *then* turn to lowering gearing. This will also help us to achieve de-gearing ambitions organically over a longer-time period and avoid these trade-offs.

6.2.2 Redistributing funds towards de-gearing in parallel to restricting dividend yields presents significant downside risk and disincentives to investors

At draft determination, Ofwat set out that:

1. Dividends will be restricted to an annual yield of 2.0% for companies for whom financeability constraints are deemed to have arisen.
2. An option under consideration was to signal more firmly that a gearing level of 70% is an upper limit beyond which dividend yields should be restricted in the 2025-30 period.
3. A further revision to the ring-fencing licence conditions of companies with weak levels of financial resilience that places a restriction on the company's ability to make distributions where gearing exceeds 70%.

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[31] CMA (2021). *Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited Price Determinations. Summary of Final Determinations. Paragraph 102.* Available here.

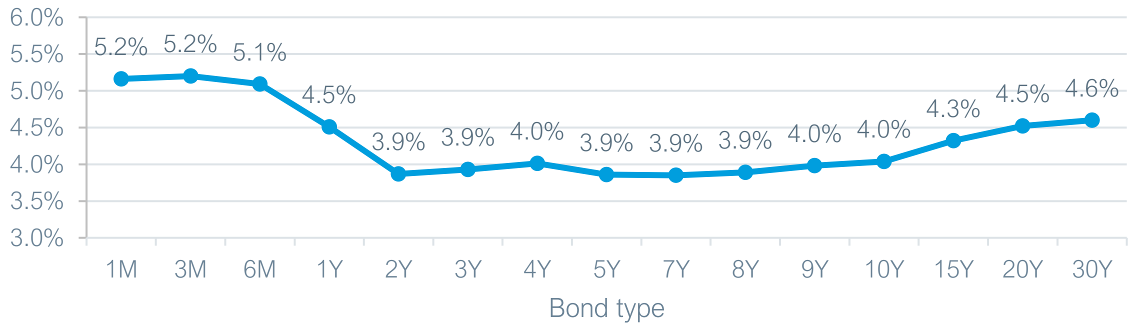
4. A view that any distributions paid by a company beyond a gearing threshold of 70% could be considered as an extraction of value, which Ofwat could then see as justifying an equivalent downwards adjustment to the RCV, implemented at a subsequent price review.

Investors entering the water sector do so with an investment horizon of around 20 years.[32] In AMP8, they will be doing so in an increasingly competitive international context, during a time of macroeconomic uncertainty and increasing operational risk, and when most of the sector is failing to earn its base return.[33] If we fail to attract investor support, the detrimental impact on customers and the environment will be very significant.[34]

The CMA has been explicit in stating *"If investors do not expect to be fully compensated for future investments over their life, then they may be unwilling to invest in the future to meet these requirements."*[35] Ofwat's choice of a 2.0% dividend yield is not only not backed by robust evidence, but also puts investment into our business at significant risk:

- **By setting an annual dividend yield close to inflation, the real interest earned per payment will be zero.** While our shareholders have historically supported our business by taking no dividends, including for the last 7 years, maintaining this position while securing investment for our business into the future is not credible.
- **A 2.0% dividend yield is significantly below that provided by benchmarks** – including all short- and long-term bond yields (see Figure 7 below). It is also significantly below both the current bank rate (5%), Bank of England market implied path bank rate (3.2% by 2026[36]) and average of HM Treasury independent forecasts (3.23% by 2028[37]).

Figure 7: Short and long-term bond yields



Source: Financial Times Markets Data as of 29th July 2024

[32] Northumbrian Water (2022). *Regulating for the long term: Supporting long-term investment.* Available here.
[33] During AMP 6 over half of the companies (9/17) failed to earn their base allowed return on regulated equity. In 2020/21 this figure grew to 14/17 companies (over 80%) with three companies having negative RoRE. Ofwat (accessed 2024). *Monitoring financial resilience.* Available here.
[34] For example, the National Infrastructure Commission has estimated the impact of not investing to be around £40 billion over the next 30 years. National Infrastructure Commission (2018). *Preparing for a drier future.* Available here.
[35] CMA (2021). *Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations.* Paragraph 3.1378. Available here.
[36] Bank of England (2024). *Monetary Policy Report – February 2024.* Available here.
[37] HM Treasury (2024). *Forecasts for the UK economy: a comparison of independent forecasts.* Available here.

- **A 2.0% dividend yield equates to a 29.4% payout ratio, which is significantly lower than comparators and diverts from industry practice.** This is based on a nominal return on equity of 6.80% (4.80% as per Ofwat's draft determination, with 2.0% inflation adjustment). By way of comparison the dividend yield of the FTSE-100 is currently 3.5%.[38] This is also lower than the dividend yield selected by other regulators. At RIIO-ED2, Ofgem selected a notional dividend yield of 3%.[39] Ofgem has chosen to maintain this dividend yield in their RIIO-3 Final Methodology.[40]
- **Pursuing restrictions on dividend payments at the same time as de-gearing presents a disproportionate downside for investors.** The time value of money denotes that dividend payments now present more value to investors than in the future. The root cause of our poor performance will take time to address. By pursuing a price control package in PR24 that skews risk to the downside and with exposure that is disproportionate, Ofwat is disincentivising the acceleration of investment to improve service to customers, communities and the environment. Ofwat's approach to dividends also creates issues for precisely the kind of long term patient capital that should form the bedrock of investment in the water sector, because these investors (including pension funds and sovereign wealth funds) typically seek to have discretion over a progressive level of yield from delivering these performance improvements.
- **Stopping dividends simply accumulates cash in the business but does not address how this cash will be used to improve service and asset health** (as shareholders may still choose to not reinvest, holding cash in the business until such time as Ofwat would permit distribution). We believe it is more effective for regulation to directly target the incentivisation of service delivery and investment levels if Ofwat consider these to be the most relevant areas of concern.

6.3 Balance of risk and return

This section should be read alongside our detailed annex on risk and return (TMS-DD-041), where we substantiate and provide supporting evidence for the summary below.

Our business plan requires us to raise c.£3.3bn of new equity and more from debt investors during AMP8. Ofwat's final determination must support, not hinder, our efforts to obtain this capital. Ofwat also has a statutory duty to secure that water companies can (in particular through securing reasonable returns on their capital) finance the proper carrying out of their statutory functions.[41] Ofwat's draft determination contains a significant imbalance between risk and reward at both an industry and company level, which will easily deter investors and increase the future cost of capital to be paid by customers.

6.3.1 Our assessment of RoRE risk range demonstrates a strong downside risk profile

Along with a large group of other water companies, we have asked KPMG to provide an independent review of expected returns in the sector. Figure 8 shows that the average water and sewerage company is looking at a return that is more than 400bps below the allowed return on equity. The chart also identifies potential further downside against this central-case outcome,

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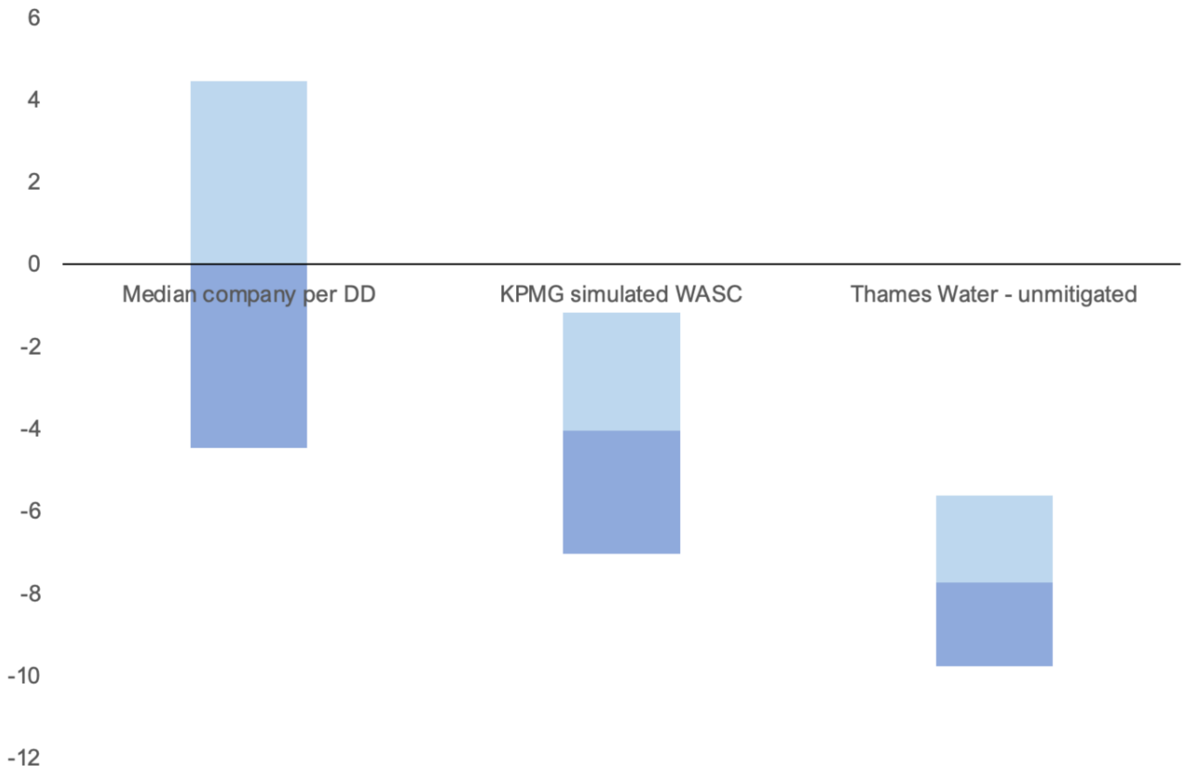
[38] Source: FactSet. Simple average of FTSE-100 company dividend yield, as at 16 August 2024.
[39] Ofgem (2022). *RIIO-ED2 Final Determinations Finance Annex.* Available here.
[40] Ofgem (2024). *RIIO-3 Sector Specific Methodology Decision – Finance Annex.* Available here.
[41] Ofwat's duties. Available here.

with the lower bound of KPMG's P10:P90 confidence interval sitting approximately 300bps below the mid-point of the distribution.

Using KPMG's modelling framework, we have sought to produce a separate analysis of our business's expected returns. Figure 8 identifies an expected under-performance against our allowed return on equity of around 775bps of RoRE and an 80% confidence interval running from 980bps to 560bps of potential loss of return. This shows that we are exposed to a significantly disproportionate level of risk compared to the sector median company.

Our assessment of the potential RoRE range that emerges after applying proposed adjustments to revenues, performance commitments and risk allocation, set out in the following section, is also set out below. The mitigated RoRE range centres much closer to zero, shows a symmetrical balance between possible under- and out-performance, and more clearly contains potential upsides and downsides within more manageable bounds.

Figure 8: P10 - P90 RoRE ranges (%) around the allowed return on equity



6.3.2 The risk inherent in our draft determination is excessive. To bring an acceptable balance to risk and return, changes are needed at both industry level and in our specific price control arrangements

To be able to deliver our ambitious goals for customers and the environment in AMP8 and to implement our turnaround plan, we need to see meaningful changes at both industry level and within our company specific price control arrangements. At an industry level, Ofwat needs to:

- Provide additional funding in base cost allowances, especially for companies that are proposing a step up in capital maintenance activity.

- Take a less demanding, and more realistic, view of the work that companies can reasonably do within base expenditure allowances and accept the knock-on consequences this has for the required level of enhancement expenditure.
- Reduce reliance on poorly specified, poorly calibrated enhancement cost models.
- Increase the allowed return on RCV from 3.66% to 4.6%.
- Provide for realistic glidepaths from the current industry median level of performance towards achievable end-of-period targets.
- Recognise that even the leading companies in the sector are currently looking at net ODI penalties, when a well-functioning regulatory regime would create a balanced mix of expected out-performers and expected under-performers.

The downside risk at an industry level is exacerbated in the context of factors outside our control that must be considered in the calibration of targets, rates and cost allowances. These factors are detailed in in Section 2 and Annex A to this document. It is therefore vital that Ofwat change its approach to make differentiated allowances for companies like ours with large investment programmes, and with higher financing requirements for AMP8 – a period associated with likely higher interest rates.

For us specifically, as a company in turnaround, Ofwat also needs to contain the downside losses that potential new equity investors may need to accept before they provide us with an equity injection. These downside losses are summarised below and notably include:

1	**Totex** | **Response Summary:** Section 3 | **Underpinning Evidence:** TMS-DD-037 and TMS-DD-038 Our draft determination totex allowance is £5.1bn lower than our April 2024 PR24 business plan submission. We will not be able to deliver the proposals within our business plan with such a degree of underfunding.
2	**Cost Sharing Rates** | **Response Summary:** Section 4 | **Underpinning Evidence:** TMS-DD-037 Differentiation of the sharing of under- and out-performance is a form of financial punishment (alongside RoRE deduction) towards companies that submit business plans which are honest and realistic.
3	**Gated Allowances** | **Response Summary:** Section 4 | **Underpinning Evidence:** TMS-DD-038 and TMS-DD-041 Holding over allowed costs to an end-of-period RCV adjustment places unnecessary strain on our cashflow. Containing no allowance for the time value of money is arbitrarily punitive and violates long-standing principles of financing reimbursement costs of using investor capital to finance investments ahead of reimbursement by future customers.
4	**ODI Rates** | **Response Summary:** Section 5 | **Underpinning Evidence:** TMS-DD-039 Challenging targets have been set for operational performance, that could expose us to £1.6bn of penalties on water and wastewater performance commitments over AMP8, if targets remain unchanged and we perform in line with our business plan assumptions. The main areas of penalties are linked to pollution events and sewer flooding.
5	**Allowed Return** | **Response Summary:** Section 6 | **Underpinning Evidence:** TMS-DD-040 The allowed return on equity sits implausibly close to the prevailing cost of water company debt and cannot be considered adequate reward for risks that investors take on when they choose to invest in water companies as shareholders.

6.3.3 Uncertainty mechanisms are critical to manage ongoing risks

The downside risks which we are exposed to require recalibration of price control elements, as well as uncertainty mechanisms to help manage risks as they arise. The package of uncertainty mechanisms we propose includes:

- Agreeing with Ofwat's proposed introduction of RPE adjustments for energy, labour and materials (noting our comments on the design of these mechanisms in Section 3.4.2 and suggestion of widening RPEs to include chemicals).
- Agreeing with Ofwat's lower cost sharing rates on enhancements and investments associated with the Industrial Emissions Directive and large schemes that are not provided with a formal gated allowance.
- Supporting the use of our delivery mechanism and gated processes for large schemes to unlock customer funding when projects reach the appropriate level of maturity and uncertainty reduction (noting our refinement comments in Section 4.1 and Section 4.2).
- We also welcome Ofwat's proposed uncertainty mechanism in relation to storm overflows. We request that there is a clear process by which we can receive additional allowances for new requirements that have to be delivered before 2030, or there is an acceptance that new work will be factored into the PR29 process and does not have to be delivered until AMP9.
- We request Notified Items to allow Ofwat to adjust our revenue control, as described in as described in TMS-DD-041:
  - To enable us to respond to the evolving requirements on Per- and polyfluoroalkyl substances (PFAS).
  - To cover a potential ban or other restrictions on biosolids application to agricultural land banks requiring a substantial change to the way we treat and recycle biosolids.
- Finally, in addition to the above changes, we think that there should be opportunity to revisit our PR24 price controls in a more fundamental way if it is clear that we are encountering significant financial distress. We would like to discuss with Ofwat how this would work in practice, but we envisage a process in which we would have the ability to trigger an interim review, setting out why we consider we are in significant financial distress, and Ofwat would, should it agree, be able to issue an interim determination which would be appealable to the CMA. We would welcome the opportunity to discuss the wording and mechanics of such a reopener with Ofwat.

Even with this package of uncertainty mechanisms, there remains a material risk stemming from the need to include additional spend in our plan that is not funded upfront, prior to any true-up. To the extent that such funding proves needed, it is not in our plan and will therefore add to overall new funding requirements during AMP8. This will be a prime consideration of our investors and our priority is to deploy newly raised financing on improving our infrastructure rather than funding timing differences. For this reason, the use of uncertainty mechanisms needs to be clear and timely.

We recognised there are a range of mechanisms available to Ofwat to manage uncertainty and support the work of Water UK to refine the work of these mechanisms.

6.3.4 We additionally propose a Turnaround Oversight Regime Aggregate Sharing Mechanism to manage risk and support investibility enabling delivery and turnaround

Even in the mitigated RoRE range, the expected level of return for investors is some way below the allowed cost of capital. And there remains a downside skew. Ofwat's view appears to be that potential equity investors will be willing to inject new capital into our business even in the face of RoRE under-performance and asymmetry in risk. This is not an assumption that Ofwat has been able to justify. The consequences of Ofwat getting this wrong are likely to be very severe in that not having the ability to secure the required equity investment will leave us unable to finance our debt, using equity and debt, and therefore we will be unable to deliver our business plan.

We think that it is necessary for Ofwat to provide for a further adjustment to risk allocation for companies that fall into the Turnaround Oversight Regime. Ofwat's PR24 incentives for performance and costs are covered by two aggregate out- and under-performance sharing mechanisms. There is an aggregate sharing mechanism for ODI payments through which out- and under-performance in excess of 300 bps of RORE will be shared 50:50 between companies and customers (or 10:90 beyond a RORE threshold of +/- 500 bps). This will operate alongside a separate aggregate sharing mechanism for costs through which under- and over-spending beyond a RORE threshold of +/- 200 bps will similarly be shared 50:50.

We recognise that a position of very high and very low returns is not desirable for customers, or appropriate for investors. A utility investment should offer predictable, stable returns and, unjustifiably high upside and downside returns should be avoided. We therefore welcome the concept of mitigating very high and very low returns with greater sharing of risk with customers.

We suggest a Turnaround Oversight Regime Aggregate Sharing Mechanism (TOR-ASM) would mean that any miscalibration of PCLs and ODIs would be less detrimental to turnaround ambitions and therefore ultimately to delivery for customers and the environment. A key feature of this regime would be that there should be a tuning down of the losses and rewards that investors face as a result of both over-/under-spending and ODI penalties/rewards. We suggest that, while operating under Ofwat's enhanced supervision, the thresholds on Ofwat's two new aggregate sharing mechanisms should be set at +/- 100 basis points of RoRE each, and that the enhanced sharing rate beyond that the thresholds should be set at 20:80 for company and customers respectively.

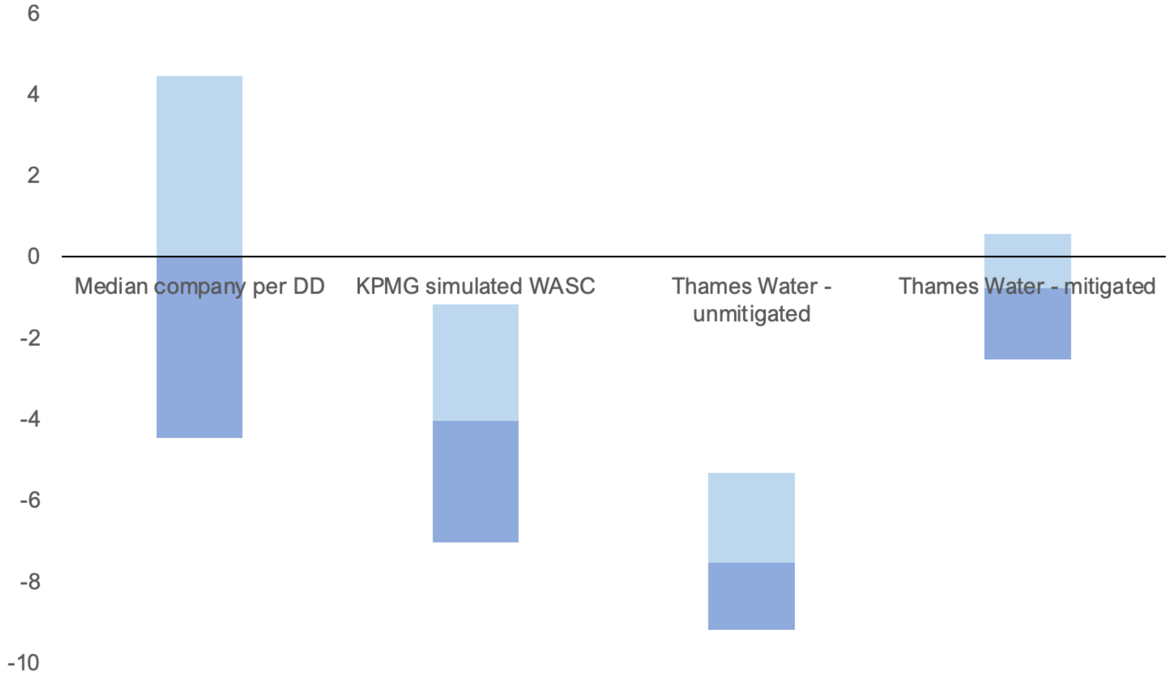
Once a company has successfully exited the turnaround oversight regime, we suggest switching back to the standard industry aggregate risk sharing schemes.

We recognise that these proposals constitute a change to the regulatory regime that we operate within. But they follow naturally from Ofwat's recognition that we (and potentially others) need to be regulated in a non-standard way while in turnaround mode. In particular, the enhanced monitoring, reporting and supervision that we will be subject to means that conventional financial incentives can be given less weight than is the case in normal times (but sufficient to incentivise us to deliver more and more efficiently at the margin). This would usefully bound uncertainty for new investors and support our efforts to raise the new equity and debt we need to deliver our plan.

6.3.5 Following our proposed refinements to the price control package our RoRE analysis is much closer to zero (but still negative)

Our assessment of the potential RoRE range that emerges after applying proposed adjustments to revenues, performance commitments and risk allocation is also set out below. The mitigated RORE range centres much closer to zero, shows a symmetrical balance between possible under- and out-performance, and more clearly contains potential upsides and downsides within more manageable bounds. This supports our position on financeability and investibility which we set out in the next section.

Figure 9: P10 - P90 RoRE ranges (%) around the allowed return on equity – mitigated analysis



6.4 Financeability

6.4.1 Ofwat's draft determination is not financeable on a notional basis.

Ofwat's draft determination is not financeable on a notional basis. The notional company exhibits an extremely weak financial profile, with negative expected returns and sub-investment grade financial ratios. This is due to Ofwat's mis-calibration of cost allowances, performance commitment levels, ODIs and MeXes. The imbalance between risk and reward generally, makes it very difficult to see why either debt investors or equity investors would elect to make new capital available to the notional firm.

Both of the key debt metrics that Ofwat refers to will be well below the thresholds that Ofwat has targeted in its draft determination, as shown in Table 12. Further details on this analysis are provided in *TMS-DD-041*.

Table 12: Notional financeability

	Costs / performance	Equity injection	Assumed dividend yield	Average AICR	Average FFO/net debt
Ofwat DD	As per DD	£941.6m	2%	1.69x	9.6%
Our assessment	As per our plan	£941.6m	2%	0.38x	2.8%

Note: the ratios in the first row of the table are taken from Ofwat's published financial model (including delivery mechanism totex).

This analysis supports the changes we proposed to the draft determination, across all the regulatory parameters, including cost allowances, incentives and allowed returns.

6.4.2 Our Integrated Business Plan would be financeable on the basis of an Ofwat final determination that included the changes we seek in this Draft Determination response The plan put forward in this response would require £3.3bn equity to deliver our investment plans, and to restore our credit metrics

In parallel with our work to understand Ofwat's draft determination, we have been developing our company business plan, setting out our best analysis of what we should do between year 5 of AMP7 and the end of AMP8 (this is known as our 2025 Integrated Business Plan, or 'IBP25').

Our latest best estimates of some of our planned areas of activity have increased beyond the levels we set in our October 2023 business plan and the update we provided to Ofwat in April 2024. Where our cost estimates have changed, we have included them in this draft determination response, we have explained why, and been clear that Ofwat should consider them as further updates to our plan.

In contrast to Ofwat's assessment of company financeability using a hypothetical notionally geared and efficient company, we have conducted a real-world analysis of the financeability/investibility of our AMP8 business plan using our IBP25 numbers (AMP8-IBP25).

Our analysis has been conducted using the expert judgement of our advisers in relation to market capacity and on the conditions new equity would be looking for to invest in Thames Water; this judgement being calibrated on the basis of market knowledge, investor return expectations in our situation and recent relevant transactions.

The analysis shows that our full plan would be financeable on the basis of an Ofwat final determination that included the changes we seek in this draft determination response, including a WACC of 4.6%. On the basis of such a determination, the analysis suggests we would need to raise £3.3bn of new equity in the market, and deliver reasonable total market returns over a reasonable holding period.

This conclusion is sensitive to some external factors, including that Ofwat does not implement any further regulation of gearing. To the extent that Ofwat does introduce further regulation, for example to cap gearing, or restrict dividend payments, this would also increase the amount of equity we need, pushing down returns and compromising our ability to attract equity on the basis we have set out above. It is also dependent upon rating agencies not tightening their thresholds for ratings assessment.

While the position presented above is strongly suggestive of financeabilty and investibility, our ability to raise new debt and equity is a market-driven process. We and Ofwat can never be entirely certain of financeability and investibility until the finance raising process has been successfully completed.

7. The way forward

7.1 To deliver our ambitious plan for customers and the environment, we need a supportive final determination from Ofwat

Our PR24 plan is ambitious. In relation to our customers' top priorities, our plan focuses on addressing delivering resilient water supplies and environmental concerns. It aligns with Ofwat's priorities on security and growth and delivers major environmental improvements, including through the water industry national environment programme.

Our plan requires £16.7bn of capital expenditure. To enable delivery of this in AMP8, with cost recovery spread over future decades, we need to be able to finance this investment using private capital markets.

Our existing shareholders have already incurred considerable cost in beginning to turn around the Company. From AMP5 to the end of AMP7 the company is forecast to spend £2.7bn more than it has been allowed, with some of this gap closed by increasing company debt. The funding gap and increased debt, alongside declining performance against Ofwat's ODI and MeXes framework, has led many of our shareholders to write down the value of their holding to zero or close to zero.

In March 2024 our existing shareholders told us based on early feedback from Ofwat that our PR24 plan was not investible. In addition, given our inability to pay the dividends that were its only income, Kemble, the company through which our ultimate shareholders own Thames Water, has defaulted on its loans.

Our current shareholders and bondholders are paying the price for under-investment and past performance. To move forward and deliver our plan, we need to attract new shareholders, who will expect to earn a reasonable return on their investment over the medium to long term. Attracting new equity in this way will also be key to our ability to access debt markets. This is borne out in the recent decisions of Moody's and S&P to downgrade our credit ratings. As Moody's states:

> "Thames Water's outlook remains negative, reflecting the increased likelihood that (1) the Final Determination expected later this year would deter existing or new shareholders from providing sufficient additional equity during the next regulatory period to allow the company to deliver its investment programme; and (2) in the absence of a pathway to future equity support, existing lenders may be reluctant to provide the company with the required flexibility to improve its immediate liquidity runway by raising new debt".[42]

We recognise that it is important for the regulatory regime to hold companies and their shareholders to account and punish their failings; this helps ensure that companies and shareholders are properly incentivised to do better for customers and the environment. In the case of Thames Water, this has happened. We are now at a point where we need to attract c.£3.3bn of fresh equity. This means we need to draw a line under the past and ensure our company is an investible proposition for new equity, so that we can deliver for our customers, communities and the environment and do so sustainably, with financial and physical resilience.

To do this requires a number of different elements. We summarise below the need for:

- A regulatory settlement that recognises the reality of our business.
- Performance and cost targets on the company that are achievable given our starting point.
- An appropriate balance of incentives on performance and cost, so we strive to do more for less but without too great a downside exposure.
- A WACC, including a cost of equity, that reasonably reflects the risk that investors will take on, in respect of the company, and the current situation.

We set out what each of these looks like in turn below.

7.1.1 Our regulatory settlement needs to be grounded in reality

We have the oldest and most complex asset base of any company in the sector in England and Wales and yet our bills have been below the industry average for the vast majority of the period since privatisation, only recently hitting average levels. We know that the age and complexity of asset base drives cost, and so this shows that we have not had the funds we needed since privatisation to undertake the investment our asset base requires. In part this may be because we have not submitted plans to Ofwat that fully reflected the work we needed to do and so we did not seek sufficient allowances. In part, it may be because Ofwat's comparative approach to regulation did not make sufficient allowance for some of the drivers of our costs. But it is clear that to make up for past under-investment and to improve the performance and resilience of our assets, we need to do more work and incur more costs than previously.

To be clear, in rebasing the activity we need to do and being open about what it will cost, we are not 'asking customers to pay twice', i.e. to fund us again for work we have already done. The

[42] Rating Action: Moody's Ratings downgrades Thames Water's CFR to Ba2, outlook negative. 24 July 2024

funding we seek is for work we have not done in the past or which needs to be re-done now or is ongoing. As noted above, from AMP5 to the end of AMP7, rather than spending less than we have recovered from our customers we forecast to spend £2.7bn more than our allowances.

7.1.2 Targets that are challenging but achievable

In its draft determination Ofwat has used industry benchmarks to challenge companies on the efficiency of their costs and on what they can achieve on performance. Draft determinations are a stage in a process, and we recognise that Ofwat uses these benchmarks as the starting point to encourage companies to put forward better evidence and argument. In relation to costs, Ofwat's benchmarks provoke companies better to justify the costs they believe they will incur in delivering their plans; where companies can show Ofwat that their delivery costs are justified Ofwat will enable customer funding. On performance, Ofwat's benchmarks are designed to provoke companies to reveal what they could do if they pushed themselves as hard as they could to deliver for their customers, communities and the environment.

Elsewhere in our draft determination response, we have demonstrated why Ofwat's cost benchmarks do not reflect the costs we justifiably incur when we provide our services or when we deliver the wide range of enhancement schemes we plan to deliver in AMP8. We accept that Ofwat should challenge us on our customers' behalf to become more efficient, but its target costs need to be realistic and enable us to do what we need to do, and we need to be given an appropriate period of time in which to drive our current costs down to those efficient levels.

Taking our arguments on botex into account, we consider that Ofwat should set our water and wastewater allowance equal to the costs we expect to incur. Where Ofwat identifies efficiency targets these must be realistic, and as a principle it should adopt a five-year glidepath to enable the company to achieve that target over time.

In our April 2024 updated PR24 plan we included c.£3bn of water network plus enhancement cases and c.£6bn of wastewater network plus enhancement cases. Ofwat has applied industry benchmarking to our enhancement cases and challenged us to reduce costs by 17% on the wholesale water network plus enhancement cases and 50% on our wastewater network plus enhancement cases. We note that Ofwat then applies an additional £126m frontier shift efficiency and real price effect to our enhancement allowance; we believe that frontier shift efficiency should not be applied to enhancement expenditure.

Earlier in our response (see Chapter 3 and annex TMS-DD-038) we have presented evidence and argument as to why Ofwat's approach to benchmarking enhancement cases was not appropriate. We also argued this funding should be included upfront in our totex and revenue allowances.

Beyond this, we welcome Ofwat's introduction of gated allowances into PR24. We think these are an appropriate mechanism to enable companies more time to produce the detailed cost justifications that Ofwat requires to unlock customer funding – allowing schemes to be delivered but providing appropriate customer protection through the process. It is our view that Ofwat should apply gated processes to those enhancement cases where it has not expressly included funding in our totex and upfront revenue requirement. This would include:

- Cryptosporidium protection.
- SEMD – investment at sites of national critical infrastructure.

- Beckton Sludge-powered Generator.

We also welcome Ofwat's approach to the delivery mechanism, we agree that this should cover elements of the WINEP programme including P-removal, chemicals and the storm overflows programme. We believe that it is appropriate for the IED programme to also be included within this due to the deliverability constraints of delivering the full scope of the programme.

We are also keen that Ofwat streamlines its in-period processes and aligns on a single process. Our strong view is that the funding process associated with Ofwat's 'delivery mechanism' as set out in the draft determination is the appropriate process for Ofwat to follow. This is because this process enables us to apply for funding (with evidence of need, optioneering and unit cost efficiency) each year, to unlock funding in the following year, aligned with when the costs will be incurred. In this way the 'delivery mechanism' allows us to finance the investment we need to make, helping us to maximise what we can deliver for our customers, communities and the environment. If Ofwat uses gated allowances that create a time lag between costs incurred and costs recovered, this will consume financeability headroom and ultimately curtail what we can deliver. As an aside, it is important that Ofwat take account of the financeability impact of its chosen gated processes in any assessment of company financeability, even one conducted on the basis of a notionally geared and efficient company.

On performance, we welcome Ofwat's move to using medians rather than upper quartile. However, in many areas the targets remain overly stretching - based on over-optimistic forecasts, erroneous assumptions on where the industry could credibly be performing in 2024-25, or by a reclassification of performance requirements or clarified regulatory guidance on required outputs to meet statutory requirements. We are committed to improving and our business plan is a stretching but deliverable approach to catching up with the industry. If Ofwat does decide to intervene, we propose alternative mitigations which, whilst on aggregate are still overly stretching, align to Ofwat and Government ambitions but with less unrealistic starting points and trajectories.

If Ofwat were to amend its calculation of the median in this way, this would change our AMP8 performance commitments as we detail in TMS-DD-039.

7.1.3 An appropriate balance of risk and return

It is clearly appropriate for Ofwat to put in place an incentive framework. However, it is important that the overall balance of these incentives is reasonable and that the balance of risk created by those incentives is reflected in the WACC. If these incentives expose companies to more downside than upside, this will have the effect of skewing expected returns to the downside, which will shift the company's financing costs up. If this upward shift is not reflected in the WACC the company will not be able to finance its capital programme for the WACC that Ofwat allows; it will be harder attract private capital – debt and equity - as the downside risk exposure will not be commensurate with the return.

An important element in ensuring these incentives are set in a reasonable way is setting cost and performance targets at an achievable level for the company. We set out what this would mean for our target costs and performance levels in the previous section. Given the risk that new investors coming into the company will bear in relation to the effectiveness and pace of the company's turnaround, placing a limit on downside exposure will be key to our ability to attract new investors and secure the scale of equity we need.

We welcome Ofwat's introduction of caps and collars in relation to over/underspend and performance incentives. In its draft determination Ofwat set these at 200bps of RoRE and 300bps of RoRE respectively. For us, 200bps of RoRE is equivalent to c.£1bn. The aggregate caps and collars in Ofwat's draft determination therefore leaves us with c.£1bn of overspend exposure before more favourable cost sharing factors are applied, and with c.£1.5bn downside exposure on ODIs. In our view, reducing each cap and collar on the ASM to 100bps of RoRE would give a combined exposure of c.£1bn across AMP8. We agree with Ofwat's proposal that the cap on costs is reconciled at the end of the AMP while for ODIs it is an annual mechanism. We believe this is a more appropriate level of risk for a company that is within the Turnaround Oversight Regime, while limiting the potential exposure of new investors in AMP8 and so helping to make our plan investible.

As set out in Section 6.4.3, our proposed approach for how this aggregate cap may be implemented would support revenue stability whilst the Turnaround Oversight Regime is in place, providing certainty over revenue to support turnaround activities for the benefit of our customers and the environment. We note that in Ofwat's 'quality and ambition' assessment, it graded our PR24 business plan as 'inadequate'. This came as a result of Ofwat assessing us as having 'failed' 16 of its 26 tests for quality and ambition. This resulted in our draft determination applying 60:40 (company:customer) cost sharing up to 200bps (or c.£1bn) of wholesale overspend, with 80:20 cost sharing applying thereafter. It also resulted in a 30bps penalty on our WACC, which Ofwat calculated amounted to £141m deduction from our allowances and which Ofwat said could be effected by means of a midnight adjustment made to our RCV at the end of AMP8.

In discussions with us about our plan and its draft determination, Ofwat told us that it was possible for us to engage with it to achieve a better assessment of our business plan. We asked Ofwat specifically whether this was possible given that some of the tests we 'failed' in its original assessment were either factual and historical (such as the timing of the submission of our plan, which we could not change) or our Board not being able to agree to Ofwat's prescribed assurance statements (such as our plan being financeable on the basis of Ofwat's WACC, which remains the case). Ofwat assured us that it would be possible for us to achieve a better assessment at final determination.

We note that since Ofwat's assessment of our plan we have:

- Revised our estimates of the cost and delivery feasibility of the statutory programmes based on the latest regulatory guidance.
- Engaged with Ofwat on our delivery planning.
- Developed additional enhancement cases for elements of our asset health improvement programme.
- Revisited our proposed PCLs, including additional stretch on our leakage ambition.
- Agreed undertakings on financial resilience which supersede the assurances sought through the prescribed board assurance statements.

On this basis, it is our view that our business plan – based on the reality of our current operating performance - would be better graded as 'lacking ambition'. To be clear, we reject the notion that our plan is unambitious, and we consider that it represents the best package we can deliver for our customers, communities and the environment, including providing for additional delivery to be funded should we unlock the ability to do so. However, applying Ofwat's nomenclature suggests that having taken the steps set out above, should secure us an improved assessment to at least 'lacking ambition'.

In our view, this would allow Ofwat to apply 55:45 cost sharing factors to our wholesale overspend and remove the 30bps penalty on WACC. This would significantly improve the financeability and investibility of our plan, in turn improving what we can deliver for customers and the environment.

7.1.4 A WACC that appropriately remunerates risk

The WACC needs to be set at a level that reflects the risk to which equity and debt providers are exposed. Ofwat includes in its revenue allowances a return on the RCV that reflects the industry-wide WACC that it calculates, based on a notionally geared and efficient company. We have made various arguments elsewhere in our draft determination response that seek changes to Ofwat's calculation of the industry-wide WACC, see annex TMS-DD-040.

However, investors invest in real world companies, and look for a return on capital that reflects the risk they perceive in that business. Investors perceive the risk of investing in us as greater than the industry average. This reflects the age and complexity of our asset base, and the historic performance of the company in relation to previous regulatory settlements. It also reflects wider regulatory risks the company is managing, for example in respect of investigations, enforcement action and prosecutions.

As outlined in Section 6.4.2, we have conducted a real-world analysis of the financeability/investibility of our AMP8 business plan using our IBP25 numbers (AMP8-IBP25). The analysis shows that our full plan would be financeable on the basis of an Ofwat final determination that included the changes we seek in this draft determination response, including a WACC of 4.6%. On the basis of such a determination, the analysis suggests we would need to raise £3.3bn of new equity in the market, and deliver reasonable total market returns over a reasonable holding period. This conclusion is strongly sensitive to external factors as outlined in Section 6.4.2.

7.1.5 The criticality of Ofwat's final determination

We cannot deliver against the level of ambition set out in our business plan without an injection of new equity capital, which will also be key for our ability to raise the new debt we will need to finance our plan. In July 2023, we announced that our shareholders had agreed to provide a further £750m in new equity funding across AMP7, subject to certain conditions being met. Our shareholders' withdrawal of support in March 2024, and specifically their declining to provide the £500m of further equity which we had previously expected, as they didn't feel their conditions would be met, was a severe setback for our business. This, together with what has been seen as an unfavourable draft determination from Ofwat has resulted in credit rating downgrades and forecast trigger events in our 2024/25 financial covenants. These restrict our ability to pay dividends in the future and raise new, or refinance existing, debt.

With insufficient totex funding, and if we are unable to raise finance to close that funding gap and to deliver an investment programme much of which is statutory, there is a risk that we could be placed into the Special Administration Regime (SAR). This would cause significant disruption to our planning for the future and to investment. We could experience supply chain disruption, issues with workforce retention and without government support we may need to cut our investment programme. All of this would result in a loss of delivery capability which, while we might build it back up, would result in a period of lost delivery we would be unlikely to make up. It would also result in delays to turning around the business and improving our asset resilience. All of this would have a medium and long-term negative impact on our customers, communities and to the environment. To exit a SAR, we would still need to become investible, which would require consideration of all the same regulatory levers that we have set out in this submission, but we would be starting from a more challenging starting point because of the damage the business would have experienced, as we have set out, in the meantime.

We know that to be investible, we must have a credible business plan to deliver for customers and the environment and turnaround our business. Our AMP8 plan, as submitted to Ofwat provides a good basis for this. But beyond this, an investible regulatory framework is also a critical priority that needs to be addressed now, in our final determination, rather than later. To achieve this will require us to work together with Ofwat and the Government to create space to deliver our turnaround and to ensure that investors are incentivised to invest in us and indeed continue investing in UK water.

7.2 The price control must build in flexibility to adapt to change

Since water companies submitted their business plans to Ofwat in October, there have already been significant changes in the requirements and expectations. On 24 November 2024, less than 8 weeks after business plans were submitted, the DWI issued a letter setting out new expectations on companies in relation to PFAS. It also became clear following transfer of responsibility for SEMD from Defra to DWI that there would be changes in the approach taken to setting out and enforcing requirements. We had been speaking to Defra and Government more widely about the logistical challenges we would face in meeting the requirement to provide bottled water to 1.5% of our population in an emergency situation in London with a view to agreeing we would provide the water but seek a mechanism from Ofwat to unlock funding for logistics when agreement had been reached on how this would work. Then, on 1 July 2024, after the transfer of responsibility to DWI, we received a proposal from DWI to make two Final Enforcement Orders (FEOs) in relation to (i) emergency planning and alternative water supply arrangements and (ii) physical security.

Ofwat's PR24 final determination will be issued around 6 months after the election of a new government. The new government has signalled that it is looking at changes to regulation, with a 'special measures' bill to be laid before Parliament in September 2024 and a broader bill expected later in the Parliament.

The new government is also expected to issue a new strategic policy statement to Ofwat, which could drive further change. In addition, on 11 July 2024, the newly appointed Secretary of State announced plans to strengthen the Guaranteed Standards Scheme (GSS) scheme to enhance protection and compensation for households and businesses when their water services are affected. Subject to consultation, this will mean that the amount of compensation customers are legally entitled to when key standards are not met will more than double. If implemented, we anticipate that these changes will cost us approximately £10m per annum in AMP8.

We have been able to seek the funding we need to deal with some of these changes in this draft determination response, including SEMD (see annex TMS-DD-038) and the new GSS payments. We have also sought specific Notified Items to enable us to respond to the evolving requirements on PFAS, and to cover a potential ban or other restrictions on biosolids application to agricultural land banks (as outlined in annex TMS-DD-041). This would enable companies to seek funding in the face of new requirements that come in during AMP8.

Finally, in addition to the above changes, we think that there should be opportunity to revisit our PR24 price controls in a more fundamental way if it is clear that we are encountering significant financial distress. We would like to discuss with Ofwat how this would work in practice, but we envisage a process in which we would have the ability to trigger an interim review, setting out why we consider we are in significant financial distress, and Ofwat would, should it agree, be able to issue an interim determination which would be appealable to the CMA. We would welcome the opportunity to discuss the wording and mechanics of such a reopener with Ofwat.

7.3 Monitoring needs to be simple and proportionate

Our customers, communities and stakeholders are keen to see us improve our performance and resilience in key areas. We therefore understand why Ofwat proposed such arrangements.

In its draft determination Ofwat seeks to establish a turnaround oversight regime, to which it envisages it would subject companies ‘where we have significant concerns about their performance in-the-round’. It notes that responsibility for management decisions should remain with the company but Ofwat seeks to provide ‘closer regulatory oversight … to respond more quickly to emerging risks and issues’.[43]

Ofwat says that it expects companies in this regime to set out and report on a transformation plan setting out how it aims to deliver performance improvements in all relevant aspects of its business so that Ofwat could then undertake ‘strategic reviews, deep dives and assessments on risks and issues where we have particular concerns’. Ofwat also says that it would appoint an ‘Independent Monitor’, with a duty of care to Ofwat and full access to company information, to monitor and report to Ofwat on the company’s progress. Finally, Ofwat seeks to put in place ‘additional customer protections’ which are not specified but ‘could include a gearing cap defined in the licence or an RCV adjustment in circumstances where dividend distributions are made about a defined gearing level’. It also says it will ‘consider whether we can use any additional mechanisms to ensure companies are effectively targeting expenditure at areas which will deliver benefits to customers’. In its draft determination Ofwat says that Thames Water would fall within such a regime. Ofwat appears to wish to reserve the right to decide in future that the regime should also apply to other companies.

While we are sympathetic to the desire for enhanced oversight of our business, we do not accept the specifics of the arrangements that Ofwat proposed in our draft determination. We consider that some of the features of Ofwat’s proposed turnaround oversight regime risk being overly complex and could impose processes on our business that are not aligned with the effective and efficient delivery of our plan.

Since the publication of Ofwat’s draft determination, we have experienced two credit rating downgrades, one by Moody’s on 24 July 2024 and the other by Standard & Poor’s on 31 July 2024. These downgrades mean that we no longer hold two investment grade credit ratings as required by condition P26 of our licence. On 7 August 2024 Ofwat published a provisional decision setting out its intention to accept a set of undertakings we offered containing a series of

[43] Ofwat, 2024, ‘PR24 Draft determinations: Our approach’, page 8

steps we would take to remedy the breach[44]. As part of these undertakings we have agreed to undertake an equity raise process and to develop and implement a company business plan that will support the turnaround of the company. We have also agreed that Ofwat will appoint a Monitor, funded by us but working for Ofwat, to oversee and report to Ofwat on our compliance with these undertakings, including the development, iteration and delivery of a company business plan that will deliver the turnaround. The Monitor will also 'promptly notify' Ofwat or any developments material to our ability to comply with the undertakings and recommend to Ofwat any additional steps we should take to restore the investment grade credit ratings.

Under our new CEO, Chris Weston, we see our turnaround being delivered as part of our day-to-day management of the business. The steps needed for our turnaround will be contained in the company business, and our CEO will drive accountability for this through the normal performance management and governance process of the company. Our business plan will also encapsulate everything we will do as part of our PR24 settlement, and other plans Ofwat has required of us in PR24 and more broadly, including our Service Commitment Plan, our Delivery Action Plan, our River Health Action Plan, and our Pollution Incident Reduction Plan.

Ofwat has also asked us in its draft determination to produce a financial resilience action plan. In our view, the best indicator of our financial resilience is our credit rating. This aligns with Ofwat's own approach to financeability in which it assesses the financeability of a notionally geared efficient company by reference to key metrics used by credit ratings agencies. Thus, we consider that our financial resilience action plan should constitute the same steps that we have undertaken to complete to Ofwat in the undertakings we have offered to remedy the breach of condition P26 of our licence by virtue of having lost our investment grade credit ratings.

Given all this, we consider that the undertakings we have agreed with Ofwat, including on reporting and provision of information and the appointment of a Monitor, fully meet the aims of Ofwat's turnaround oversight regime, as set out in the draft determination. These undertakings will ensure that Ofwat has full visibility of what we are doing to improve our financial resilience, as indicated by the restoration of our investment grade credit ratings, and to improve the performance of our company and deliver its turnaround, as set out in our business plan. These undertakings also provide for Ofwat to have 'eyes and ears' in our business, paid for by us but working to Ofwat. We will also, of course, comply with any normal regulatory reporting for example as part of Ofwat's annual performance reporting process. In our view, any additional reporting and monitoring is unnecessary and would be disproportionate, risking additional cost to customers with no benefit and risking management distraction.

As set out in Section 6.4.3, we propose a Turnaround Oversight Regime Aggregate Sharing Mechanism should be implemented, providing a better balance of risk in a single mechanism and reducing the impact of any miscalibration of PCLs or ODIs on wider turnaround ambitions.

7.4 Our PR24 ask

We believe the plan we have put forward is the right plan. It focusses on customers priorities, is challenging but realistic about what is required to deliver it.

[44] Ofwat (2024). *Thames Water Utilities Limited ('Thames Water') – proposed undertakings under Section 19.* Available here.

We have proposed that £1.7bn of our £23.7bn totex plan goes through a delivery mechanism because we do not have line of sight on how it can be delivered currently. This is something we are committed to working through. A further £1.3bn is proposed within the large gated scheme mechanism.

We also know that our £23.7bn plan would require c.£3.3bn of fresh equity. We have set out a number of changes that Ofwat could make with the framework of its draft determination to improve our ability to attract this equity. We summarise these requested adjustments in the table below.

Table 13: Summary of our ask

1	Cost allowances - Base cost allowance of £13.3bn - Enhancement cost allowance of £10.4bn, of which £1.3bn is within the large-gated schemes and £1.7bn is within the delivery mechanism
2	Cost sharing rates - Base cost sharing rates should be symmetrical and the same for all water companies.
3	Uncertainty and delivery mechanisms - Effective RPEs for labour, energy, materials and chemicals. For materials, the RPE should be on both base and enhancement expenditure. - Use in-period gated processes to provide a route to funding where deliverability (delivery mechanism) is uncertain and where Ofwat is yet to be persuaded on need or cost (asset improvement, large-gated schemes). Mechanisms must unlock funding in-period when costs are incurred and need to be simple, streamlined processes. - PCDs should be constrained to only those where statutory obligations are insufficient to protect customers. Timing of any remaining price control deliverables should be aligned with company plans. - The delayed delivery cash flow mechanism should be removed. - Notified items for: o Bioresources: Notified item to enable all WaSCs to recover the cost associated with land acquisition for sludge storage in case of changes to the farming rules for water. o PFAS: Notified item to enable all water companies to recover costs associated with additional expectations in respect of water treatment (including monitoring) for ‘forever chemicals’. - We think that there should be opportunity to revisit our PR24 price controls in a more fundamental way if it is clear that we are encountering significant financial distress. We would like to discuss with Ofwat how this would work in practice.
4	PCLs and ODI rates - Set PCLs on the basis of industry median, using actual AMP7 outturn, taking account of APRs from 2024 - Application of caps and collars across all PCs - Recalculation of specific ODI rates, to use latest available data and to ensure rates reflect proportional rewards and penalties - Specific amendments to individual PCLs, including:

	○ A common water supply interruptions PCL should be set for WaSCs based on the upper quartile of historical WaSC performance. Alternatively, the cap on large events used in AMP6 should be reintroduced. ○ External sewer flooding PCL should be set using more accurate recalculated data that we have provided ○ Internal sewer flooding PCL should be amended to set a starting point and trajectory that reflects evidence on actual industry performance. ○ Total pollution incidents PCL should be amended to set a starting point and trajectory that reflects evidence on actual industry performance.
5	Allowed return - Industry-wide wholesale WACC of 4.60% (Real, vanilla)
6	Turnaround Oversight Regime Aggregate Sharing Mechanism - Tighten the aggregate cap and collar from 200bps RoRE to 100bps RoRE, after which cost sharing of 80% customer, 20% company applies.
7	Monitoring - We accept the need for Ofwat to monitor companies in turnaround closely, where they are provided with adjustments in the price control settlement that are designed to enable their turnaround. - We have undertaken to Ofwat to improve our financial resilience and develop and implement a business plan that will turn our business around, and we have accepted the appointment of a monitor working for Ofwat and to Ofwat's mandate but paid for by us.

7.5 Post PR24: a direction of travel

One of the strengths of economic regulation UK-style has been the ability and willingness of regulators to evolve their approach to adapt to changing circumstances and priorities. This has been true in water regulation as in other sectors. Immediately following privatisation the then Director General of Water Services created the RCV as a financial mechanism to enable cash negative companies to borrow so that the cost of investment today could be spread across decades while keeping financing costs low. In 2014, with the aim of enabling and incentivising companies to find new efficiencies and focus on customer priorities, Ofwat moved to an outcomes and totex approach and began to make more use of market mechanisms. PR24 represents a shift towards a regime of more regulatory oversight and intervention, with the regulator defining what companies should do, when and how and complex in-period processes enabling this.

The challenges facing the sector today will undoubtedly require further evolution of the regime in PR29. The existing asset base across the industry is ageing faster than it is being replaced, and will come under more stress from climate change and population growth. On top of this, we know that the expectations of our customers and communities in relation to the resilience of services, environmental impact, sustainability are shifting rapidly.

The regulatory regime needs to enable and encourage companies to deliver what customers and communities expect and to spend customer money wisely. So little of the investment programmes over the next control period is at companies' discretion – the large amount of our capital expenditure is statutorily driven – that there will need to be greater scrutiny applied *between regulators and Government* as to what companies should be required to deliver. In undertaking this exercise government and regulators should understand not only the level of bills customers are prepared to pay, but also the size and shape of the deliverability and financeability envelopes companies operate within. It is no longer tenable for Government and regulators to assume away these constraints and ratchet up investment requirements. If this continues, and if delivery requirements are absolute (e.g. involving enforcement action or substantial penalties for non-delivery) this will ultimately create more downside risk exposure for investors, making the sector less attractive to investors, pushing up capital costs and, paradoxically, reducing the sector's capacity to deliver.

Regulation going forward will also need to pay more attention to resilience. Ofwat's performance commitments and associated ODIs have improved companies' focus on performance but this – coming at a time when efficiency challenges ratcheted up and performance penalties have been substantial for many companies – may have been at the expense longer term resilience, including asset health. Ofwat's recent focus on asset management maturity is helpful, but a move to Ofgem-style asset resilience standards with funding attached would be welcome, especially if Ofwat were open to taking the position today as the baseline for funded improvements.

There is also scope for regulation and policy to enable innovation and different delivery models. Direct Procurement for Customers (DPC) provides the basis for solutions to be delivered outside the traditional water company, especially if this could be done with more freedom to allocate risk to those best placed to manage it and to secure longer term certainty over the recovery of costs achieved by market testing. DPC (and indeed SIPR) could provide the basis for innovative approaches to delivery of multi-AMP programmes, such as SuDS. But this would require longer term regulatory frameworks to enable and encourage development of capability in the supply chain and the use of enterprise governance models (as is happening in energy with ASTI).

One area of regulatory policy that may need to shift to achieve this is the way the assessment of the quality and ambition of company plans is conducted. It is important that this assessment is refocussed on providing incentives for well-evidenced and well-argued plans with challenging but realistic stretch, rather than incentivising companies to agree with Ofwat's positions on for example on WACC and cost corridors.

It is also critically important that the sector has the ability to finance the future investment needs by accessing private capital at low cost. The regulatory regime is a key determinant of this.

In recent years there has been a narrative from some, including Ofwat, that there is a 'wall of money' ready to invest in UK regulated infrastructure and the water sector in particular. And the view that the economic regulatory regime in water is the 'gold standard' for supporting investment has been taken for granted. At the PR24 draft determination city briefing, for example, Ofwat noted 'the UK water regime is strongly supportive of investment and of long term investors investing in this sector' [45]. This has perhaps led the regulator to pay less attention to financeability and investibility, placing greater weight on the extent to which it has been perceived as enable companies to earn returns that are perceived as too high when delivery has not kept pace with expectations. This has been compounded by the fact that the water sector's investment needs have ticked upwards at the same time as customers have been hit by a cost-of-living crisis, making any perceived source of funding that is not the customer bill, and

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[45] Ofwat (2024). *PR24 draft determinations. City Briefing – transcript*. Page 24. Available here.

especially shareholders who are seen as having enjoyed unreasonably high returns in the past, seem attractive.

Ofwat responded at PR19 with tough challenges on efficiency and very demanding performance benchmarks, as well as a low cost of capital and greater exposure for companies to cost and performance penalties and a low WACC. Industry performance in AMP7 demonstrates how this challenge has been realised in practice. In a note to investors, Barclays Research[46] analysis noted totex performance to date in AMP7 (to 2023/24) sits at -2.4% RoRE underperformance versus the regulatory contract, whilst ODI performance to date sits at -0.7%.

If Ofwat does not strike a better balance with its PR24 final determination than its draft determination, some in the sector will find it challenging to attract the capital they need to deliver their plans at the cost that Ofwat envisages in its WACC. Yet Ofwat has said that its draft determination for AMP8 is only financeable at the sector level with substantial new equity. As the scale of the investment programme increases over time, the ask of private capital will also increase. Moody's recent note estimated that the £272bn it identified in company long term investment plans would require £80-£100bn of fresh equity to come into the sector. Recent Barclays Research[47] analysis also estimated a cost of equity of 6.1% (real, CPIH) is required versus Ofwat's allowance of 4.8% and compared to Ofgem's Sector Specific Methodology Decision position of 5.4% for RIIO-3. Beyond equity, it is also clear that the sector will need the ability to issue considerable quantities of new debt, again with customers' interests served for this to be low cost. And yet currently spreads on water industry debt are 50bps higher than for electricity transmission.

The regulatory regime contains a powerful and effective tool kit for the allocation of risk and return. The RCV based model of monopoly regulation has enabled the delivery of c.£200bn of privately financed investment in the water sector since privatisation. It is capable of enabling the delivery of far more investment in future, but a reset is needed. Companies need cost allowances and performance targets that are challenging but achievable. Incentives need to reflect a symmetrical distribution of expected returns, with a WACC that reflects the risk and makes sense by reference to sector comparisons. It needs to be recognised that long term patient capital (such as pension funds and sovereign wealth funds) will need a dividend yield. Price controls need to be simpler and more consistent across similar sectors.

In addition to these substantive resets there also needs to be a reset in the tone of the debate. Companies do need to be held to account and it is right that genuinely poor performance and behaviour is called out. But the toxic narrative that has been created around the sector risks undermining our ability to deliver for customers and the environment. It creates an impression that regulators and policymakers are intent on creating and crystalising downside risk, which has an impact on investor sentiment. It affects our ability to recruit good people to do the hugely important things we do every day. And it is contributing to some our people experiencing unacceptable abuse as they work to keep customers supplied with life's essential service.

[46] Barclays (5 August 2024) *Breaking the water cycle – no longer so positive.*
[47] Ibid

7.6 Conclusion

Our Board, our management and our people are enthusiastic about the opportunities available to us in AMP8. We are excited by the ambitious outcomes we could deliver for customers, communities and the environment and about the role we could play in enabling growth across our economy. We also know that our plan will be challenging to deliver.

PR24 is the opportunity to enable to deliver the turnaround needed. The representations we have made in our PR24 draft determination response provide a way forward so as to achieve this. Subject to Ofwat's approval, we have a plan that delivers for our customers, communities and the environment, that can also attract the necessary capital.

Annex A: Challenges facing Thames Water and the sector more broadly

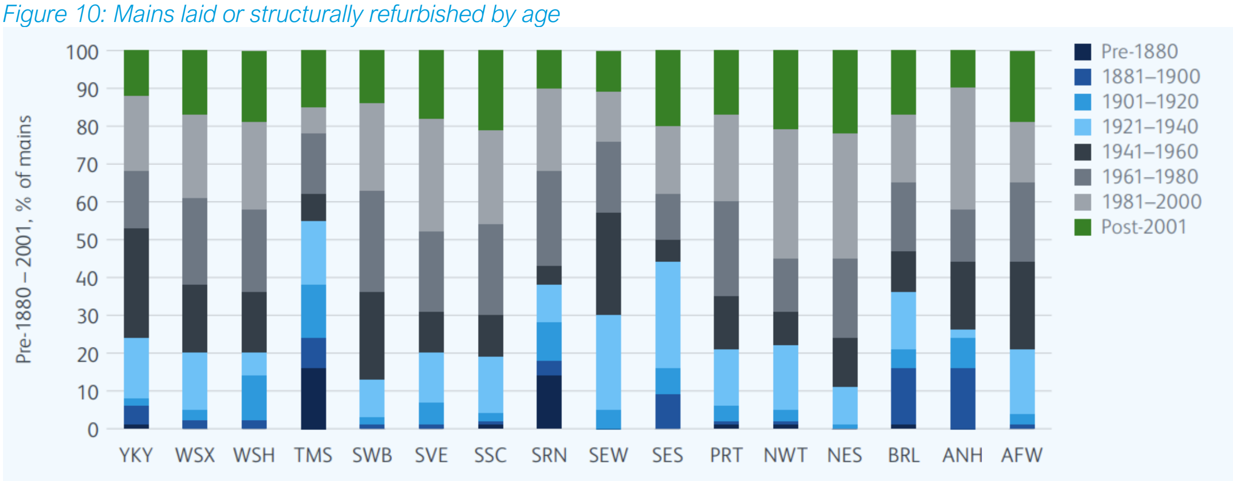
This Annex is supplemented by research we commissioned research from Mott MacDonald on the "Rationale for London Additional Expenditure Factors affecting performance and cost" (TMS-DD-116). That provides an extensive assessment of the evidence of thy serving London is more complex and expensive than on water regions.

Our ageing assets, geography and population characteristics increase cost of delivery and are not fully captured in Ofwat's allowances

Ageing assets and geology

We have the oldest and most complex assets compared to all other regions in England and Wales - with an average age of 79 years compared to the industry average of 56 years. We are also the only company in the industry where almost 40% of our assets are over 100 years old. [48]

Figure 10: Mains laid or structurally refurbished by age



Around 60% of our mains are made of cast iron, which exposes our network to a relatively higher risk. We have a predominant geology of London Clay which is particularly susceptible to shrink-swell behaviour and is highly corrosive for iron pipes.

Pipe failures are strongly correlated with age and ground material type. Our analysis suggests that between 2004 and 2020, we undertook around 0.4 repairs per km per year – more than double the average failure rate of other distribution mains during the same period. We have observed that the failure rate of cast iron pipes increases with age, and those pipes over 100 years are much more likely to fail. We know there is a link between discolouration and the use of cast iron pipes and their corrosion.[49]

Population density

Compared to all other GB regions, we have the highest population density – 5,598 residents per km^2 compared to an average of 434 residents per km^2 in England, and 150 residents per km^2 in Wales. Uneven population growth since the start of privatisation is also affecting London, and therefore our business, more than the rest of England and Wales. UK population growth over

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[48] Economic Regulation, cited in Thames Water (2023). *PR24 Our Business Plan.* Page 141. Available here

[49] Thames Water (2023). *PR24 Our Business Plan.* Page 45. Available here.

the period 1981 to 2022 has been 19%, compared to 30% in London. London and the South East also witnessed the greatest regional shift in homeworking patterns during the pandemic, a trend which has not fully unwound.[50]

Our network is therefore under the most stress, with the highest hydraulic load and volume per length of main. The growth in our population means that more water will have to be supplied, more sewage treated and disposed of, and construction of more homes for this growing population will mean more surface water run-off.[51] It also means higher network reinforcement costs to prevent customers from experiencing low water pressure and sewer flooding, increased pollution and storm overflows.

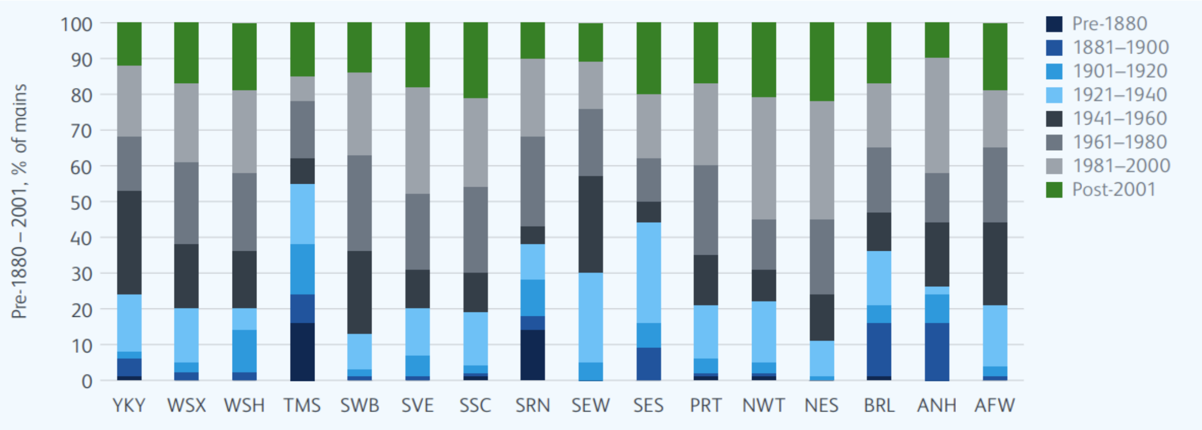
Our analysis demonstrates that we have around 1,000 more Food Service Establishments (FSEs) per 10,000 km of sewers than the second highest company in the sector, and more than 2,000 FSEs than the industry average[52]. These are a major source of fat, oil and grease in sewers.

Our region has a high proportion of occupied basements. In inner London, over 17% of properties have a basement. Only South and West Yorkshire have a proportion greater than 5%.[53] This means that we must expend greater effort to protect basement properties from the risk of flooding, reflecting the risk it poses to public safety in this type of property.

Population transience

We have an 18% migration rate compared to a 12% average across the rest of the UK.[54] Transience impacts our business in two main ways: First, our costs increase as we need to process our customers' change of address, for example to open, close or modify their accounts, issue new and final bills; and second it increases our exposure to bad debt, because the more customers relocate, the harder it is to recover debt from them. Economic Insight's cost benchmarking models, based on peer-reviewed models, show a statistically significant impact of transience on efficient retail costs.

Figure 11: Measure of overall transience by water company (2013/14 to 2019/20)



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50 ONS (2022), *Homeworking in the UK – regional patterns: 2019 to 2022*. Available here.
51 Mayor of London (2011). *Securing London's Water Future.* Available here.
52 See TMS-DD-037 - Cost efficiency
53 Office for National Statistics (2022). *Population and household estimates, England and Wales: Census 2021.* Available here.
54 Economic Insight, cited in Thames Water (2023). *PR24 Our Business Plan.* Page 45. Available here.

Loss of green spaces

London has a high proportion of non-permeable surfaces, including the biggest decrease in plant cover in front gardens in the UK. It is estimated that half of all front gardens are paved over in the capital, with a 36% increase between 2005 and 2015.[55] 2010 research indicated that the size of green garden space lost every year in London is equivalent to 2.5 times the size of Hyde Park, and this year the London Surface Water Strategic Group expects that the risk of surface water flooding has increased since then as more green space has been paved over or built on.[56]

Within this context, the increasing and damaging effects of climate change are already having an impact on our region. The devastating floods of 2021 were followed in 2022 by a 40°C heatwave that ignited over 1,000 wildfires across the capital. The UK Met Office projects more extreme weather events, and particularly more frequent and intense rainfall for London into the future.[57] When combined with changing weather events, the inability of rainwater to be absorbed into the ground (because of our high proportion of non-permeable surfaces) significantly increases the risk of flooding, and in turn the burden on sewers and the risk of pollution – putting an acute strain on our services.[58]

On top of these factors, we know that there are wider challenges in delivering for our customers and the environment

Mismatch in water demand and supply

By 2050, the UK is facing a shortfall of nearly 5 billion litres of water per day between the sustainable water supplies available and the expected demand. This is more than a third of the 14 billion litres of water currently put into public water supply.[59] Without further action, there is a roughly 1 in 4 chance over the next 30 years that large numbers of households will have their water supply cut-off for an extended period because of a severe drought.[60]

Our ability to maintain resilient supplies, enable economic growth (as per the Box below) and mitigate the impact on the environment will depend on a twin-track approach: delivering new supplies of water (through new water sources, storing more water, reusing treated wastewater from our treatment works and transferring water from other areas) and reducing water demand (by improving water efficiency by promoting water efficiency and installing smart meters in customers' homes, and reducing leakage).

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[55] Royal Horticultural Society (2015). *Why we all need Greening Grey Britain.* Available here.
[56] London Surface Water Strategic Group (2024). *London Surface Water Strategy Interim Report.* Available here.
[57] Met Office (accessed 2024). *UK Climate Projections.* Available here.
[58] City of London Corporation (2023). *City of London Strategic Flood Risk Assessment 2023.* Available here.
[59] Environment Agency (2024). *A summary of England's revised draft regional and water resources management plans.* Available here.
[60] National Infrastructure Commission (2018). *Preparing for a drier future.* Available here.

Case Study: Water supply and the economy

Data centres provide essential infrastructure for storing, processing and accessing the data our digital economy relies upon. It is estimated that the enabled benefits of data centre services equate to almost 6% of global GDP, and support 565,000 jobs worldwide.[61] Data centres also require a significant amount of water for cooling. A large data centre can use anywhere up to 4 million and 19 million litres of water per day.[62]

Slough Trading Estate, located within our region, is considered to be the largest data centre hub in Europe, and second largest in the world.[63] Ensuring a resilient supply of water in our region is therefore directly linked to enabling UK economic growth.

Operational resilience

Changing climate conditions and highly variable weather are already having a significant impact on the resilience of our operations. We are increasingly experiencing temperature extremes and rapid temperature changes. During the last few years alone, this included:

- One of the most severe droughts on record in 2022. Southern England reported the driest since Met Office records began in 1836, with just 17% of average rainfall.[64] This was caused by a drier than average winter and spring, followed by an exceptionally dry summer with temperatures exceeding 40°C and soil moisture deficit showing record levels of dryness.[65] During this month, we experienced water demand of 150 million litres a day higher than normal in London and 90 million litres a day higher than normal in Thames Valley.[66]
- A 'freeze thaw event' in December 2022. This was prompted by prolonged low temperatures falling between -5°C and -10°C, with many weather stations recording their lowest December daily maximum and minimum temperatures since December 2010. Temperatures then rose dramatically, with increases of over 17°C within 24 hours.[67] While we were able to recover quickly because of the increased resources we had on the ground and the level of pre-planning we had put in place following, we received 56% more reports of visible leaks than average in the same month.[68]
- The wettest 18 months between October 2022 and March 2024 since Met Office records began in 1836. In December 2023 to February 2024, Southern England experienced 153% of the long-term average rainfall.[69] As a result of this prolonged wet weather and persistently high flows through our assets, spills more than doubled in 2023/24.[70]

The impact of changing climate conditions on operational resilience well documented, and recognised by Ofwat.[71] These include, but are not limited to:

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[61] Digital Realty (2023). *Data Center Impact Report.* Available here.
[62] The Washington Post (2023). *A new front in the water wars: Your internet use.* Available here.
[63] The Times (2022). *Slough is reborn as data centre central.* Available here.
[64] Met Office (2022). *Direst July in England since 1935.* Available here.
[65] Environment Agency (2022). *Monthly water situation report – July 2022.* Available here.
[66] Thames Water (2022). *Drought Update 8 August 2022.* Available here.
[67] Met Office (2022). *Prolonged spell of low temperatures, December 2022.* Available here.
[68] Thames Water (2023). *TWUL response to John Russell.* Available here.
[69] Met Office (2024). *Seasonal Assessment – Winter 2024.* Available here.
[70] Thames Water (2024). *Annual Performance Report 2023/24.* Available here.
[71] Ofwat (accessed 2024). *Climate change.* Available here.

- During periods of drought - lower flows which leave less water for abstraction for water supplies, increased loss of water due to evaporation, and increased demand for water.
- Shrinking and swelling of the ground placing added pressure on and movement of our ageing assets, causing increased leaks and bursts.
- Less effective water treatment process (such as slow sand filters) during periods of low temperature, creating water quality risks.[72]
- A reduction in the quality of water (and increase in treatment required) we take from the environment as a result of heavier downpours and changes to the ecology of rivers from rising temperatures.

Customer and stakeholder expectations

Customers' expectations of service and operational performance are increasing across all sectors. This can be seen in the UK Customer Service Index, which noted that "every sector has lower customer satisfaction than a year ago, with the biggest downturn in Utilities and Transport."[73] CCW *Water Matters* research, which has that found satisfaction with water companies has fallen in recent years.[74] Customers no longer judge us purely on the quality of our service, but also how we are led and governed, and our ethical and social commitment. 77% of our customers think that it is important that companies act as a force for good. 94% agree that we should work to reduce our impact on the environment. We are also experiencing widespread expectation that our rivers will meet bathing water quality standards; a much higher standard than is legally required today. 64% of our customers support the total elimination of river spills by 2030.[75]

The combination of these factors puts pressure on maintaining existing service levels, and increases the need for investment to repair, replace and enhance our infrastructure. The PR24 final determination for Thames Water needs to recognise and provide sufficient funding to mitigate these population, climate and geological challenges.

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[72] Maiyo et at. (2023). *Slow Sand Filers for the 21st Century: A review.* Available here.
[73] Institute of Customer Service (2023). *UK Customer Satisfaction Index.* Available here.
[74] CCW (2024). *Water Matters 2024.* Available here.
[75] Thames Water (2023). *What Customers, Communities and Stakeholders Want*

Annex B: Summary of our support for customers who struggle to pay their bills

- We have opted for a bill profile that uses a natural PAYG (Pay As You Go) rate which we found to balance the competing needs of customers to both smooth bill increases per year and to keep bills low at their peak.
- Our Priority Services Register will grow to 75% of the eligible population, amounting to over 1.2 million households. To enable this, we are increasing our data sharing with the energy industry and organisations such as the London Fire Brigade, our colleagues will continue to spot vulnerability during customer interactions, and we will undertake marketing awareness campaigns and work with trusted third parties to create increased awareness of our support.
- We are introducing a new, targeted social tariff that will support over 600,000 customers. Building on our October business plan, and with CCW's support, we have accelerated our plans to use the 'water affordability threshold' (where bills represent more than 5% of net equivalised income) as the eligibility criteria for our new, targeted social tariff to 1 April 2024. As opposed to the existing 'low income' criterion, this recognises the support required by customers below the water affordability threshold but not on a low income.
- We have doubled the support we will provide through our 'Extra Support Scheme' to £7million in 2024/25, benefitting an additional 18,000 customers. Through this scheme, we will provide £400 towards arrears for households with deficit budgets.
- We have undertaken and are acting on in-depth research[76] on vulnerability in our region. This includes a process where metered customers who are unable to pay their bills will automatically be transferred to a payment plan. We have piloted this scheme, which has demonstrated an 8% improvement in customers able to pay their bills.
- We will innovate our tariff structure and have set out our plans to use revenue from a Rising Block Tariff to fund social tariffs by an additional £60 million (equivalent to £14 per household), on top of our existing flat cross subsidy which can generate £97 million of support from directly billed customers. Since our business plan was submitted, we have conducted additional customer research[77] which has demonstrated an additional £33 of cross subsidy, totalling £53 per household, is acceptable to our customers in order to help additional households who are struggling to pay their bills. Therefore, our response to the draft determination incorporates this new level of cross subsidy in addition to the Rising Block Tariff mechanism, totalling over £260m per year. This will allow us to support an additional 117,000 households.

[76] Thames Water (2023). *Vulnerability 'deep dive' research report.* Available here.
[77] Thames Water (2024). *Cross Subsidy Social Tariff Research 2024.* Available here.

Annex C: Our approach to governance and assurance

We have designed and implemented a robust, risk-based governance and assurance process over our draft determination response, which is owned and overseen by the Board. The Board has discussed and had opportunity to challenge the response, supported by access to the assurance we have put in place.

Our approach to assurance is consistent with the approach we took when preparing our business plan. We summarise the assurance completed over the draft determination response in the table below.

Response area	Relevant Board assurance area	1st line	2nd line	3rd line
Delivery action plan	Deliverability	Lead, verifier, and owner assurance and sign off. Check and challenge from PR24 programme team.	Internal audit and assurance team	Deloitte
Cost efficiency	Deliverability	Lead, verifier, and owner assurance and sign off. Check and challenge from PR24 programme team.	Internal audit and assurance team	Arup
Plan to secure financial resilience consistent Undertakings in Lieu (UiLs)	Financial resilience	Lead, verifier, and owner assurance and sign off. Check and challenge from PR24 programme team	Internal audit and assurance team	
Submission documents		Lead, verifier, and owner assurance and sign off. Check and challenge from PR24 programme team, strategic assurance from Complete Strategy.	Internal audit and assurance team	Deloitte: key areas
Data submission		Lead, verifier, and owner assurance and sign off. Check and challenge from PR24 programme team	Internal audit and assurance team	Deloitte: key data tables

Thames Water

It's everyone's water