

Anglian Water
PR24 CMA Redetermination
Response to Provisional Determinations
Submitted 11 November 2025

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Chapter A

Introduction and Executive Summary

1 Introduction

- (1) Anglian set out in its statement of case (“**SoC**”) a number of material shortcomings in Ofwat’s Final Determination (“**FD**”) (notably, its material underfunding of base costs, mis-calibrated ODIs exposing the notional company to downside risk, and insufficient cost of capital allowances), which would, if not corrected by the CMA, lead to Anglian being underfunded for the delivery of high-quality services to customers and for the protection of the environment.
- (2) Anglian recognises that the CMA panel and staff have had to review an immense amount of complex material in a short space of time and appreciates their hard work in considering the issues raised by Anglian and the other Disputing Companies (“**DCs**”) up to this point. In this submission, and particularly in this summary, Anglian’s comments focus on those aspects of the provisional determination where it considers that further work is needed rather than those which it supports, to assist the CMA in planning its work for the next stage of this redetermination.
- (3) The CMA has taken many steps in the right direction in its Provisional Determinations (“**PDs**”) to correct the shortcomings in Ofwat’s FD. In particular, the PDs recognise that the FD failed to strike the right balance between risk and return, thereby leaving the notional company unable to attract the equity needed to finance its long-term investment programme: The CMA has adjusted the cost of equity, taken steps to recalibrate the ODI package and made a welcome intervention on frontier efficiency to set this at a level which better reflects the underlying evidence on the sector’s scope for productivity improvements. However, the evidence supports further revisions in these areas to fully address the risks.
- (4) Notably, the cost of capital continues to underplay the scale of the investability and financeability challenge. The cost of equity remains below what is indicated by a number of sensible cross-checks and what is ultimately required for investors to fund the notional company. The

inclusion of a proposed CPIH-CPI wedge is both untested and erroneous: resulting in the CMA both understating the real cost of debt and leading the CMA to overestimate the spread between the cost of debt and equity. Fixing these will put the notional company on a firmer footing to attract the investment that the sector needs over this AMP and subsequent AMPs.

- (5) Overall, the PD also presents an unacceptable level of downside risk in the round. This is driven primarily by the PD position on base costs, a downside skew on ODIs, and retaining an assumption of financing outperformance that is inconsistent with the PD underlying inflation assumption. Such asymmetric, downside risk should be addressed “at source” or, if infeasible, by sufficient “aiming up” on the cost of capital.
- (6) On base allowances, Anglian faces unacceptable risks as a result of chronic underfunding, a position which is materially exacerbated by the PDs. Having been underfunded in AMP7 and subject to a £286m (5)% shortfall in base allowances in Ofwat’s FD, the CMA now proposes a further (£66m) reduction from the FD position (£117m once apparent modelling implementation errors are corrected).¹ This intervention flows from the CMA’s rejection of Anglian’s proposed cost adjustment claims compounded by its approach to modelled base allowances for all Disputing Companies, which has failed to achieve its intended effect. The results of this modelling materially increase risk for Anglian’s performance, resilience, asset health, customers and environment and cannot credibly persist to set Anglian’s base allowances at final redetermination.
- (7) More generally, the PD does not go far enough to address the specific challenges that Anglian faces in its water scarce region (which drive the need for its boundary box and leakage CACs). Nor does it go far enough to use the tools available to the CMA to address asset health. The deterioration of the sector’s asset base will have long-lasting, and costly impacts on customers and the viability of the water industry as a whole and we urge the CMA to revisit its provisional views in this regard.

¹ The delta with the PR24 FD is based on Table 9.1 of the PD.

- (8) The pressures on Anglian's growth demands have intensified sharply since the original Final Determination, driven by a combination of renewed national policy ambitions, rapidly evolving regional development plans, and increasingly stringent regulatory expectations. Government now places a clear onus on the water sector to actively enable accelerated housing and economic expansion, particularly in Anglian's region, which encompasses critical national priorities such as the Oxford-Cambridge Arc and major developments in Greater Cambridge and Bedford. These fast-growing areas have been subject to revised growth forecasts and development targets that substantially exceed the assumptions underpinning Ofwat's earlier allowance setting. In parallel, new and more demanding environmental and permitting requirements are being imposed on growth schemes, substantially increasing delivery costs while also adding operational complexity. This shifting landscape has resulted in a widening gap between existing regulatory allowances and the real infrastructure needs required to unlock and support nationally significant growth. Without timely and sufficient funding aligned to these updated development pressures, water infrastructure risks becoming a critical constraint, potentially delaying housing delivery, stalling economic opportunities, and undermining the government's flagship growth objectives for the region.
- (9) Anglian accepted its enhancement allowances in the round at FD, recognising both upsides and downsides within the settlement. The CMA's focus on selected issues raised by certain Disputing Companies has disrupted this careful balance, altering the position without considering areas where Anglian accepted negative adjustments. This shift undermines the integrity of the original package. A clear example is the treatment of P-removal where Anglian has identified critical issues with the CMA's modelling approach. The effect of these errors acts directly against customers interests insofar that the higher costs a company seeks the greater funding they will get. Anglian asks that the CMA restore balance to the enhancement package to ensure it supports sustainable investment and effective delivery, particularly in light of the scale and urgency of growth required in the region.

- (10) Further adjustments are also needed to adjust the downside skew which remains across key performance commitments in the ODI package meaning that Anglian is still exposed to disproportionate penalties even where it achieves significant performance improvements, and underfunded base allowances that are now significantly below the Ofwat FD and Anglian's Business Plan.
- (11) Getting the balance between risk and return right in the Final Redetermination ("RD") necessitates a number of changes on both sides of the equation. This response sets out Anglian's submissions on key aspects of the PDs and endeavours to provide clear and unambiguous remedies that the CMA could and should adopt to correct course. Consistent with Anglian's considerations throughout, it recognises the potential impacts on customer bills of the CMA's redetermination and has sought to focus only on material issues which if left unresolved would have a shorter and longer term on impact on customers and the environment as well as the overall investability of the sector.
- (12) We welcome the opportunity for further constructive engagement with the CMA during the next phase of the process to address these remaining issues, with a view to ultimately securing a redetermination which meets the needs of Anglian, its current and future customers and their environment.

2 Base Costs

2.1 Base Cost Modelling

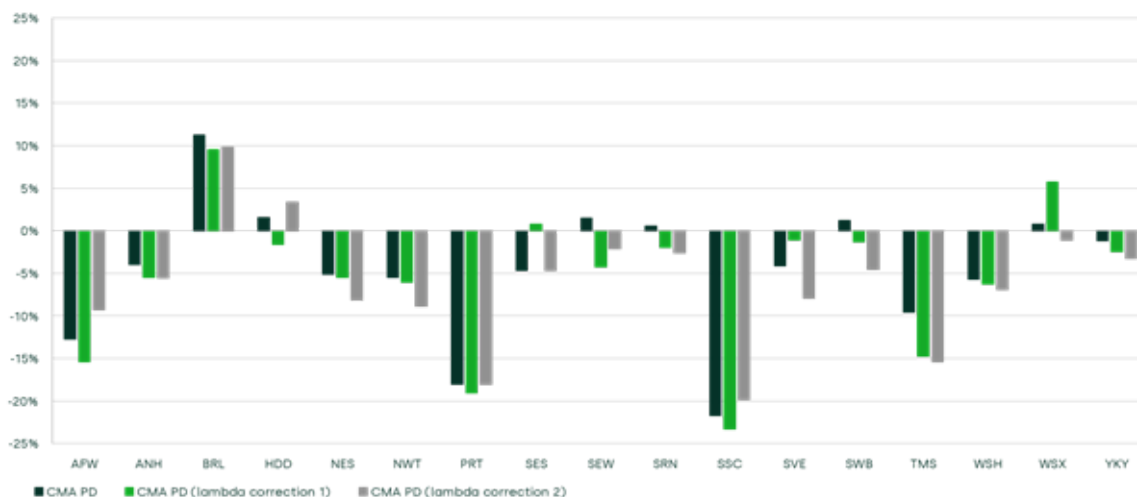
- (13) The base cost modelling in the PD is marred by procedural defects that have not enabled Anglian or the other Disputing Companies to engage properly with the CMA on its approach. Additionally, the models: (i) fail to determine efficient allowances as intended; (ii) breach fundamental economic principles; (iii) lead to poor regulatory outcomes and incentives; and (iv) will further exacerbate the already extreme challenges that Anglian faces in meeting its base funding obligations.

- (14) Specifically, the CMA has provisionally decided to assess eight different issues raised by two Disputing Companies through a ‘unified framework’, via the Least Absolute Shrinkage and Selection Operator (LASSO) method. The outcome produces unstable models (the “**PD models**”) that violate fundamental base cost assessment principles - established over the course of the CMA PR14 and PR19 redeterminations, and Ofwat’s PR19 and PR24 reviews. This is despite the PD’s stated intention to ‘*work within the grain of Ofwat’s PR24 FD approach*’.
- (15) Individual examples that demonstrate the extent to which the PD models yield unstable and unsound results are the following:
- (i) The results are highly sensitive to dropping individual companies from the modelling sample, indicating that the model is capturing spurious relationships between cost drivers and noise/inefficiency. For example, dropping Thames Water from the wholesale wastewater modelling halves its efficient cost prediction by 45%, from £3,755m to £2,073m.
 - (ii) The CMA deviates from Ofwat’s well-established and supported approach to energy real price effects by including an energy price index in the cost models. Excluding energy costs from the CMA’s modelling framework reveals that this is capturing a spurious relationship between energy prices and costs unrelated to energy, as the index is still selected. Including an alternative index for coffee, tea and cocoa as a driver demonstrates this scope for spurious correlation - it outperforms the energy index in ‘explaining’ the increase in industry costs over AMP7 and is selected by the LASSO framework as an explanatory variable for TWD costs. Including the energy index in the models reduces industry cost allowances by £1,271m (3.1% of modelled base costs).
 - (iii) The CMA uses what amounts to a statistical ‘non result’ - that the regional wage variable it has introduced is not chosen by the LASSO variable selection process - to justify removing a sector-wide risk protection from real labour price effects for two cost areas (WRP and

WWNP costs) while retaining an uplift for TWD costs. The CMA does not explain why operations in TWD are subject to labour cost pressures, while those in WRP and WWNP in the same geographies, under identical company remuneration policies, are not. When the CMA's own 1se lambda rule is correctly implemented, a further counterintuitive result is introduced - a negative relationship between costs and wages (i.e. an increase in wages implies a reduction in costs) is applied to wastewater costs.

- (iv) The results from LASSO deliver fundamentally different results from Ofwat's FD models for almost all companies, as set out in the Figure 1 below. If correct, this would imply that the CMA has identified a completely different relationship between costs at the industry and company level than Ofwat over the same time period and using the same cost data. Such a large and systematically negative deviation in outcomes is simply not plausible. The result that almost all companies should have significantly lower base allowances for AMP8 under the CMA PDs modelling approach is also not supported by evidence that the industry overspent PR24 allowances by 17% during AMP7.²

Figure 1: Gap between Ofwat's FD assessment of modelled base costs and the CMA's assessment of modelled base costs, pre-Frontier shift



² Ofwat Water company performance report 2024-25 (October 2025), page 39.

Source: Oxera analysis

- (16) For this degree of change to be driven by such unstable models goes beyond a collection of technical and conceptual errors, it demonstrates a modelling framework that is fundamentally not fit for purpose.
- (17) At no point do the PDs evidence: (i) *whether*, and if so (ii) *why* the CMA considers that Anglian (and the industry as a whole) have been materially overfunded on base (in the case of the industry by £2.6bn pre-frontier shift / £1.8bn post-frontier shift once corrected for modelling errors), relying only upon (critically non-robust) econometrics. Nor do the PDs address the inconsistency between identifying a “*pressing need*” for asset health action while deciding that industry base allowances must be materially reduced.
- (18) The level of implementation errors in the models have also added complexity and undermined transparency for Disputing Companies in considering and responding to the PDs. Companies have, in this context, had insufficient opportunity to engage with the CMA on an intervention of this scale and complexity.
- (19) The result of the new models for Anglian specifically is to exacerbate significantly the funding gap which the Company already faces, with direct and negative impacts for performance, asset health, resilience and ultimately customers and the environment. The models cannot be credibly used to set modelled base allowances at Final Redetermination.
- (20) Anglian therefore requests that the CMA reinstate the Ofwat FD models to set Anglian’s modelled base costs and reconsider its analysis of Anglian’s CAC claims. Anglian welcomes further constructive engagement with the CMA on these issues.

2.2 Cost Adjustment Claims

- (21) The CMA has rejected Anglian’s specific cost adjustment claims (“**CACs**”) which will, if retained in the Final Redetermination, also significantly underfund its base costs with direct consequences for longer term service to customers and the environment.

- (22) For boundary boxes, the CMA has failed to assess need, concluding (contrary to logic and its purported framework) that unless Anglian can demonstrate 100% efficiency, no CAC funding can be granted at all. Anglian requests that the CMA conduct a need assessment and update its efficiency assessment
- (23) For leakage, the CMA incorrectly concludes Anglian's leakage position is not different to others and does not address the key question of whether Anglian is funded for frontier activities, or explain the inconsistency between the CMA's position that PD base allowances fund only average performance while denying the need for additional funding at the frontier. The CMA wrongly dismisses Oxera's analysis showing significant underfunding of Anglian's Implicit Allowance, on the basis of an erroneous claim that the statistical significance of some of the variables are not significant. All variables included in Oxera's models to assess the cost efficiency of the claim are statistically significant at the 10% level or greater - unlike the PD base cost models which include a number of statistically insignificant variables. Anglian asks the CMA to revisit this CAC, which seeks funds (consistent with PR19) for Anglian's critical frontier leakage efforts in its water scarce and climate vulnerable region.
- (24) In relation to the industry-wide mains renewal CAC, the CMA retains Ofwat's decision that "base buys" a 0.3% renewal rate (instead of the 0.2% Anglian requested). Anglian asks the CMA to revisit this, as its calculation: (i) disproportionately weights the smallest company in the industry's renewals rate; and (ii) uses the wrong period (13 years) to set costs, even though the industry benchmark in the base models is determined solely by the last 5 years' spend. The effect of the latter is essentially to retrospectively punish companies for not achieving a 0.3% rate (which was not specified to companies at the time of AMP7) despite the CMA having rightly removed such a mechanism elsewhere in the PD.
- (25) The CMA rejects Anglian's gravity storage and sewer points claim, by finding no new evidence of conditions deteriorating since Anglian's 2023 ASRAP assessment. However, storage point deterioration severity and

rate data, and new insights from monitors on gravity sewer faults have brought increased concerns for both assets, which – combined with the base-stretch imposed in Ofwat’s FD – led Anglian to make this claim. Evidence on these assets has been requested by Ofwat as part of its Asset Health Roadmap exercise. The CMA should either review the evidence and assess the CAC in full, or – if it chooses to deprioritise evidence outside the ASRAP – be clear that it has done so, so that a high-level review by the CMA does not unjustly prejudice a proper review under the Roadmap.

2.3 Retail allowance

- (26) The PD incorrectly assumes that Anglian’s request to update Retail allowances requires onerous data collection and model reruns. The ask is only for simple updates to one existing variable using data the CMA already holds. Anglian requests that the CMA revisit this ask, update the Retail Models for Frontier Shift (as below) and for the FD inflation assumption to ensure FD consistency.

2.4 Frontier Shift

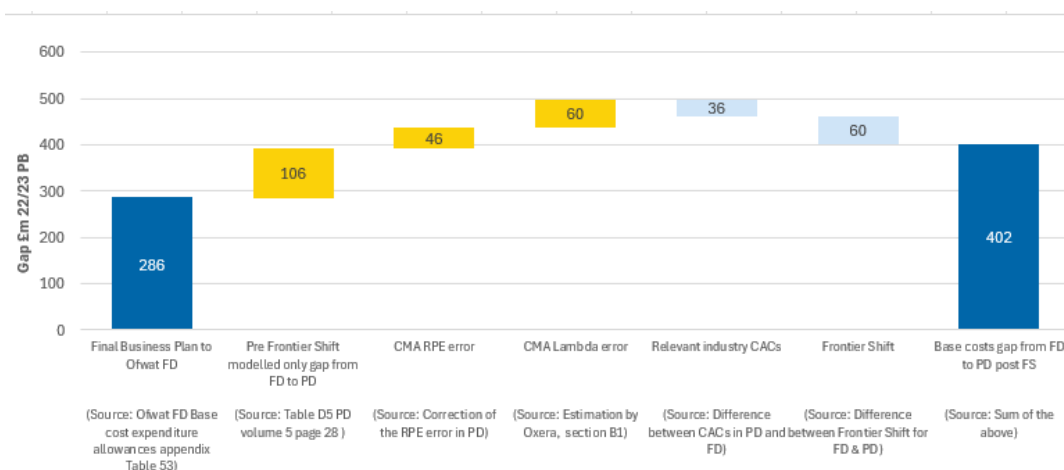
- (27) Anglian welcomes the steps that the CMA has taken to correct Ofwat’s approach to setting frontier shift, and requests that the CMA use the most up-to-date data when setting frontier shift in the Final Report. The Frontier Shift should also be applied to the Retail model to ensure consistency with the CMA’s stated effect of aligning its approach with Ofwat’s FD and of applying the Frontier Shift to all expenditure mostly outside management control.

2.5 Sense check on base costs

- (28) Anglian considers that, despite ample evidence provided throughout the PR24 redetermination process, the CMA remains mistaken as to the level of activity that is implicitly funded through base. Ofwat’s FD left Anglian with a 5% (£286m) funding gap in AMP8, which has been stretched by an additional £66m (£117m post correction of modelling implementation

errors), now resulting in a gap of £402m.³ This impact is illustrated in the post-lambda correction scenario, by Figure 2 below.

Figure 2: Business Plan to PD Gap, including corrections for RPE and Lambda errors



(29) Importantly, the PDs show no evidence of the CMA engaging with why – based on real-world evidence outside of an econometric model - its base outcomes are correct for Anglian, and why (despite finding Anglian to be an efficient company and the level of evidence before it on Anglian’s climate vulnerable region and the risks to asset health), it believes Anglian has been overfunded on base. The PDs also fail to consider how the outcome of the modelling is consistent with significant overspend in AMP7 and how the much lower allowances will affect Anglian’s operational and financial resilience.

3 Asset Health

(30) Anglian wishes to emphasise to the CMA the adverse impact on asset health that the Provisional Decision would have if finalised as it stands.

(31) Due to the lack of funding for base activities, the effect of the PD is in practice a 22% further challenge on Anglian’s already severely overstretched capital maintenance funding. Indeed, once accounting for: (i) metering, mains renewal and boundary box implicit allowances; (ii) the

³ Delta calculated based on PD Table 9.1.

value of Anglian's boundary box and leakage CACs, Anglian is left with just £149m (20% of its Water Base CAPEX, excluding network reinforcement) to cover all other water capital maintenance spend on all of its other assets – e.g. storage points, water treatment works, boosters, boreholes and more. This is not reasonable or attainable. Anglian's SoC detailed the consequences of underfunding projects promoting asset health which are profound: assets will continue to decline, and future customers will be forced to face this issue without the benefit of time to consider the best approach and at much greater cost.

- (32) Moreover, Ofwat's and the CMA's approach is contrary to the principles outlined in the Independent Water Commission's review of the water sector, led by Sir Jon Cunliffe, the wealth of evidence from third-parties on asset health concerns, and the CMA's own findings as to the "*pressing need*" for asset health action. This review concluded that the 'current regulatory approach to infrastructure resilience is not delivering a sufficiently resilient system to tackle both short-term shocks and long-term pressures'⁴. While Anglian acknowledges that the CMA is not responsible for designing the future for the water sector, it is wrong that the PDs recognise but make this core asset health challenge harder.
- (33) Anglian asks that the CMA take action to correct this effect, either by granting its CACs, applying a use-it-or-lose it capital maintenance allowance per its suggestion at DD, or creating industry gated allowances for asset health.
- (34) In summary, Anglian therefore requests that the CMA restore the Ofwat FD models, re-assess Anglian's CACs, and act to ensure the FD protects asset health.

4 Enhancement

- (35) Anglian did not dispute its enhancement allowances at Final Determination and welcomed Ofwat's positive efficiency assessment. Anglian accepted the overall enhancement package in the round, recognising both upsides

⁴ Independent Water Commission, Final Report (21 July 2025), para. 877 (See [here](#)).

and downsides to secure a balanced settlement, with Anglian's programme within 2% of Ofwat's benchmark and tested thoroughly. However, the PD takes a narrow focus on selected enhancement elements raised by some of the Disputing Companies. This approach introduces arbitrary changes for Anglian, distorting the careful equilibrium of Anglian's original package and overlooking areas where Anglian accepted negative adjustments.

4.1 P-Removal

- (36) Anglian has two fundamental critiques of the approach taken by the CMA to determine P-removal allowances. First, the approach taken does not achieve what it sets out to deliver - it conflates exogenous drivers of higher costs with company- or site-specific inefficiency. Second, the premise of the CMA's approach – seeking to control for the different technologies deployed at different sites – is unsound. The scoping factors, such as the type of technology deployed, that the CMA is trying to isolate are discretionary management decisions in response to external regulatory drivers that are already well captured within the benchmarking dataset Ofwat uses to set its models. The result is a framework that produces model specifications lacking engineering and economic rationale, where higher wages lead to lower costs and smaller schemes are more expensive than larger schemes. Critically, the schemes with highest level of requested costs are allocated to a group that receives higher funding for the same underlying scheme characteristics.
- (37) The effect of these errors is that the higher costs a company self-reports, the greater funding they will get. As an illustration, when Anglian replicated the CMA's model, and increased its own costs by an arbitrary £70m (without any changes to scope or requirements), the model awarded Anglian an additional £51m in allowances.
- (38) Contrary to the efficiency duty, this will have the effect of rewarding and incentivising inefficiency and penalising companies, like Anglian, which sought to minimise costs in their business plans in order to drive efficiency.
- (39) Further, the approach of categorising P-removal projects serves to grant significantly different levels of funding to projects that are fundamentally

similar. Anglian demonstrates this by providing examples of specific schemes that, whilst fundamentally similar, have been granted significantly different levels of funding by the CMA's approach, based on which artificial group they fall into.

- (40) The CMA's approach penalises companies that choose efficient, lower-cost technologies for P-removal since allowances are determined principally by the costs submitted, rather than by an objective assessment of the technology needed to meet regulatory requirements. Under this model, higher requested costs, regardless of their efficiency, result in higher allowances. As a result, a company like Anglian (specifically recognised by both Ofwat and the CMA as having efficient costs for P-removal), which has demonstrably adopted efficient technical solutions and submitted correspondingly lower costs, receives reduced allowances.
- (41) Finally, Anglian is concerned about the CMA's use of population density and wage variables in assessing P-removal enhancement allowances. Anglian notes that, whilst there may be validity in the notion that urban sites generally cost more, the CMA must, therefore, assess density at a site-level. Otherwise, the CMA risks providing additional funding to companies for projects it classifies as 'urban' when, in fact, the projects are anything but urban. Additionally, Anglian submits that the CMA's use of the wage variable is inappropriate as it suggests that higher wages lead to lower efficient costs, which is clearly untrue.
- (42) In light of the above, Anglian asks the CMA to revert to a modified version of Ofwat's Final Determination P-removal models, allowing for engineering deep dives to address specific issues raised by other Disputing Companies in their statements of case.

4.2 Growth-related adjustments

- (43) In August 2025 the Government indicated it would no longer fund the relocation of Cambridge WRC through the Housing Infrastructure Fund. This decision triggered the need for a fundamentally different investment approach at the existing site, which had previously expected to be decommissioned in the early 2030s. Anglian and Ofwat both support a

resolution through the CMA to secure efficient, targeted funding, safeguard customer interests, and enable delivery of vital infrastructure that underpins national growth ambitions for Cambridge and the wider Oxford-Cambridge region.

(44) Moreover, since the submission of its Statement of Case, Anglian has experienced significant cost pressures in delivering the investment required to support growth at sewage treatment works (“**STWs**”). These pressures are driven by a combination of evolving external factors, including national policy ambitions, regional development dynamics, and tightening regulatory expectations.

(45) Accordingly, Anglian requests:

- (i) Reversal of the under-delivery clawback: Noting that under-delivery clawback mechanisms were removed from Northumbrian Water’s growth at STWs allowances, Anglian requests that the same approach is taken consistently across companies.
- (ii) Reversal of dry weather flow compliance adjustment: Anglian noted its concern that Ofwat applied a dry weather flow compliance adjustment in its FD for growth at sewage treatment works. As a result of this, Anglian lost funding amounting to over £25 million where Ofwat deemed that Anglian had failed to meet its compliance obligations. However, Ofwat did not consider that a number of these schemes are being judged as non-compliant due to their size (i.e., need to be larger in order to comply) and, therefore, growth funding is required in order to ensure compliance. Anglian requests that the CMA reinstate the growth allowance for the sites affected by this adjustment, enabling the delivery of the additional capacity required to support catchment growth.
- (iii) Inclusion of modelled allowances for large growth schemes: Ofwat’s Final Determination reduced the funding for three schemes (Cambridge, Whitlingham and Bedford) by capping allowances at Anglian’s original, lower cost forecasts, rather than the higher

industry benchmarks. However, Anglian is now facing significant and unforeseen cost pressures at these sites (including accelerated local development and tougher environmental requirements) that justify allocating the full, efficient modelled allowances to enable timely and effective delivery of essential infrastructure. Anglian therefore requests that the CMA reinstate the full, efficient modelled allowances for these growth schemes, in support of the government's strategic ambitions for housing and economic development.

- (iv) Inclusion of a two-sided PCD: Anglian has previously requested a two-side PCD for growth at sewage treatment works which would return allowances to customers if enhancement growth schemes are not delivered by the end of AMP8. Anglian requests that this approach is endorsed in the CMA's final report. Alternatively, Anglian requests revised upfront allowances to reflect updated growth forecasts.

5 ODIs

- (46) Broadly, Anglian welcomes the progress that has been made on the calibration of ODIs in the CMA's Provisional Decision, noting the CMA's engagement with issues raised in Anglian's SoC. However, Anglian considers that there is a need for the CMA to go further in order to correct industry-wide ODI miscalibration and remedy the fact that the ODI package is unduly stretching, thus not constituting a fair bet for companies or investors. Furthermore, Ofwat's latest consultation is likely to render ineffective even those improvements the CMA made in its PDs.

5.1 Addressing downside skew of the ODI package

- (47) Despite the progress made between Ofwat's Final Determination and the CMA's Provisional Decision, there remains an unacceptable degree of downside risk in the AMP8 ODI package. This is, in part, because the CMA has considered only (i) a small subset of PCs; and (ii) a high-level review of the risk analysis carried out by KPMG and Ofwat in respect of ODIs.

- (48) The consequence of this approach is that the CMA has failed to address the broader downside risk that permeates the ODIs package. For example, the CMA has not addressed concerns with ODI calibration that lay behind Anglian's proposal for the OAM deadband to be removed, claiming that any remaining downward skew is small, which is not consistent with the available evidence.
- (49) Therefore, to assist the CMA with its consideration of this issue, Anglian has undertaken substantial additional analysis and identified that the PCL baselines are a key driver of this negative skew.
- (50) Ofwat's approach to setting the PCL baselines was to first determine PCL baselines for 2024/25, then set a glidepath for the rest of the AMP. This means that any error in the PCL baselines will be extrapolated across the entire AMP. The availability of 2024/25 outturn data means that Anglian can now analyse performance against the AMP8 PCL baseline. This shows that the baselines are far too demanding and that there is clear negative skew in the proposed ODI package
- (51) Anglian therefore, requests that either:
- (i) The PCL miscalibration is addressed at source (an approach for which Anglian is not able to propose a viable method); or
 - (ii) Make the changes to the OAM that Anglian requested in its SoC to rebalance the risk and reward in the ODI package.

5.2 Impact of 2024/25 Data

- (52) Anglian believes that the CMA should use the latest available data in setting PCLs and ODIs and should do so consistently in order to avoid any individual company unduly benefitting from selective use of the latest data.

5.3 Total Pollution Incidents PCL

- (53) Upwards pressure on industry performance as regards total pollution incidents has meant that current funding levels are not sufficient to achieve the stretching PCLs that have been set. The effect of this is that Anglian,

and other Disputing Companies, will consistently be in penalty despite making significant progress to improve their pollutions performance.

- (54) Therefore, Anglian proposes that the Total Pollution Incidents PCL baseline should be calculated by taking each company's average annual number of pollution incidents per length of sewer over a four-year period to 2023/24 and then using the median across companies of those averages to set the PCL baseline.
- (55) Anglian believes that this approach can be readily justified and provides clear incentives and competition between water companies to improve performance on total pollutions, taking into account their unique circumstances, whilst ensuring that outliers are not able to excuse poor performance.

5.4 External Sewer Flooding PCL

- (56) Whilst Anglian welcomes the CMA's review of the external sewer flooding PCL, it notes that the CMA's approach to setting the PCL is to take a midpoint between the PCLs set in Ofwat's Final Determination and those proposed in Anglian's' SoC.
- (57) Anglian contends that this approach is inappropriate because:
- (i) The lack of historical context for this PCL does not justify giving 50% weighting to Ofwat's proposed PCLs;
 - (ii) The CMA has not explained how the more demanding PCL can be funded through base cost allowances;
 - (iii) It is not the case that Anglian's proposal was unduly lenient for Anglian. Even if this were the case, other areas of the ODI/PCL regime outweigh any perceived leniency; and
 - (iv) If the CMA is to set the PCL in this way, it would warrant less stretching PCLs elsewhere.
- (58) In light of this, Anglian's request is that the PCL for external sewer flooding should be set in the same way as for internal sewer flooding.

6 PCDs

- (59) Anglian notes that, in its Provisional Decision, the CMA has relied on Ofwat's ongoing consultation to resolve concerns with the PCD framework. Ofwat's willingness to increase flexibility and provide clarity in the framework is a welcome step.
- (60) Nevertheless, Anglian maintains its targeted request that the CMA remove some of the unnecessarily prescriptive and burdensome elements of the PCD framework, noting that this will assist in the delivery of programmes to meet PCDs, unencumbered by PCDs which actively hinder companies in their work.
- (61) Therefore, Anglian requests that the CMA provide additional direction to Ofwat to require:
- (i) That Ofwat make it clear which PCDs are within scope of the change control;
 - (ii) That certain scheme-specific PCDs are included within the change control;
 - (iii) That Ofwat takes a more flexible approach to the materiality threshold; and
 - (iv) That Ofwat allows for timelier and more frequent conclusion of change control windows.

7 Investability, Financeability and WACC

- (62) Anglian welcomes both the CMA's directional shift in terms of recognising the importance of a robust investability and financeability framework for PR24 and its recognition that Ofwat's FD failed to correctly assess the cost of capital, rendering the notional company unable to attract the new equity needed to finance its investment programme.
- (63) Nonetheless, the PD continues to underestimate the investability and financeability challenge at PR24 and beyond, by setting a cost of capital which is still below what is indicated by a thorough assessment of the risk

and return balance in the package at this critical juncture for the sector. Anglian believes that the following changes are needed.

- (64) First, the cost of equity should be increased to at least the top of the CAPM range to make the price control an investable proposition.
- (i) This is supported by several intuitive cross-checks, which can and should serve as a vital tool for determining the point estimate and evaluating the robustness of CAPM at PR24. As explained in Chapter F, simple cross-check evidence that points towards a cost of equity above CAPM should not be discarded by the CMA. This is more so since the PD approach to inflation, through the inclusion of a 0.4% CPIH-CPI wedge, overestimates the spread between cost of equity and cost of debt. Setting the point estimate at the top of the CAPM range and removing the CPIH-CPI wedge assumption would instead lead to a spread of 187bps (more aligned with Anglian's SoC) and a much clearer signal to investors of a pathway towards the estimated required spread of 250bps discussed in the hearings. This point is reinforced by updating the ARP-DRP analysis: the PD cost of equity of 5.9% aligns only to the implied cost of equity of SVT and UU. Clearly, the cost of equity for the notional company should be higher (and Oxera's analysis finds that the average cost of equity implied by eight water companies' bonds (including SVT and UU) is 6.43% up to end-June 2025 data).
 - (ii) This is also necessitated by the significant shift in the investment required in AMP8 and beyond. Put simply, the low-risk low-return investor that would normally invest in the sector is now facing the prospect of a long-term investment with no certainty as to whether and when it will attain an unclear level of returns. The PDs are wrong that this is simply about deferral of dividends. The issue is that the profile and uncertainty of cash returns over a period longer than 25 years at the proposed cost of equity makes such an investment unattractive, especially in the presence of numerous alternatives available to investors.

- (iii) There is finally a clear need for a cost of equity at least at the top of the CAPM range to overcome investor scepticism in circumstances where confidence in the sector and its regulator is at record lows (as recognised by the Independent Water Commission). The PD is also wrong that the fear of statutory requirements and ODI penalties will compel new investment at below the cost of capital: this is only likely to dissuade investment and exacerbate the challenge of investor scepticism.
- (65) Second, the PD conclusion that long-term CPIH should be assumed to be 2.4% by including a CPIH-CPI wedge of 40bps is based by the selective application of a single OBR forecast, unsupported by the balance of evidence. As the OBR itself states, *“limited confidence [...] should be placed in our central forecast given the scale of shocks that inevitably drive a wedge between any central predictions and subsequent outcomes”*.⁵ It is thus odd that the PDs have chosen to do so. Chapter F explains in detail why an analysis of historical data does not support the existence of such a wedge, and the OBR forecast on which the wedge is based is highly sensitive to a number of assumptions that are unlikely to hold.
- (66) Third, while the PD CAPM model contains welcome assessment and adjustment of the TMR and beta, it continues to underestimate the cost of equity. This is manifested in particular in the PD approach to the convenience yield: Despite the existence of empirical evidence supporting the presence of a convenience yield for nominal bonds across tenors and in contrast to the PR19 approach, the PD ignores that companies cannot issue debt at levels equivalent to index-linked gilts. Anglian notes that a realistic RFR must sit above the ILG yield and, in that sense, the evidence and economic circumstances continue to support the PR19 redetermination approach to RFR estimation. The CMA should also recognise that the beta estimate is still likely to downplay the risk in the sector when setting the point estimate for the cost of equity.
- (67) Finally, Anglian requests targeted changes in terms of (i) recalibrating the cost of debt components; (ii) making necessary changes to ensure the

notional company's financeability; and (iii) accompanying changes to the removal of the Retail Margin Adjustment.

8 Correctly balancing risk and return

- (68) The PD also does not yet strike the right balance between risk and return, such that the PD is a fair bet for investors in the notional company: wrongly concluding that such investors would more likely than not make the allowed return.
- (69) The PDs err by assuming that any downside skew on ODIs will be balanced out by a positive skew on financing. This is incorrect, on the one hand, because it relies on an assumption of inflation outperformance that is inconsistent with the CMA's long-term inflation assumption (i.e. the notional company is unlikely to outperform on financing). It is also wrong because the PD does not recognise the further downside risk resultant from significantly lower base allowances nor the additional risk that inherently stems from the management of large capex programmes (i.e. the notional company is exposed to more downside risk than the PDs calculate).
- (70) The remaining risk in the package should be addressed "at source" in the various areas explored in this document or, where that is not possible, by sufficient "aiming up" on the cost of capital.

9 Concluding remarks

- (71) To conclude, Anglian welcomes that the CMA has made important steps in the right direction to address several of the key shortcomings in Ofwat's FD and have identified where further work is needed to address those that remain at PD.
- (72) Anglian has focused in this response, and in this summary, on those remaining issues and its requests of the CMA. Anglian continues to recognise the potential impacts on customer bills of the CMA's redetermination and hence in its response retains focus solely on material issues. Critically, Anglian remains dedicated in supporting customers through its range of affordability and vulnerability measures. Ultimately, it is in the clear interests of Anglian's customers and the environment now

and in the longer term that an appropriate redetermination is reached for Anglian and its region.

- (73) Anglian is ready to engage fully and constructively with the CMA during the next phase of the process to that end.

Chapter B – Base Costs

Introduction

Anglian rigorously challenged itself on the efficiency of its base costs in its Business Plan, removing £142m to align with Ofwat's assessment of efficient costs. Ofwat agreed that Anglian was efficient, however Ofwat's FD left Anglian with a 5% (£286m) funding gap in AMP8 while also significantly increasing the scope of activities to be delivered from the base envelope, seemingly at no extra cost.

Rather than correcting this via Anglian's CACs, the CMA's PD further reduces Anglian's FD total base funding by an additional £66m (which increases to £117m once the lambda modelling error is corrected). As a result, the critical impacts of base underfunding which Anglian set out in its SoC - for performance, asset health and ultimately customers and the environment - are now worsened by the PDs.

These implications are inconsistent with the CMA's duties and principles of good regulation. They appear to be the result of unnecessary and erroneous steps and a failure to engage properly with the evidence before it. The PD approach and outcome are unwarranted and must be remedied at FD.

Anglian's representations on these issues are set out in Chapter B.1 (Base Modelling); B.2 (CACs and Other Base Claims) and C (Asset Health).

Chapter B.1

Base Costs – Modelling

The CMA's approach to base cost modelling imposes a fundamentally different cost structure for the Disputing Companies without reasonable justification. The approach is marred by procedural defects that have hampered Anglian and other Disputing Companies' ability to engage properly with the CMA on its approach. Moreover, the models: (i) fail to determine efficient allowances as intended; (ii) breach fundamental economic principles; (iii) lead to poor regulatory outcomes and incentives; and (iv) will further exacerbate the already extreme challenges that Anglian faces in meeting its base funding obligations.

The PD approach produces unstable models (the "**PD models**") that violate fundamental base cost assessment principles. This is despite the PD's stated intention to '*work within the grain of Ofwat's PR24 FD approach*'. For example:

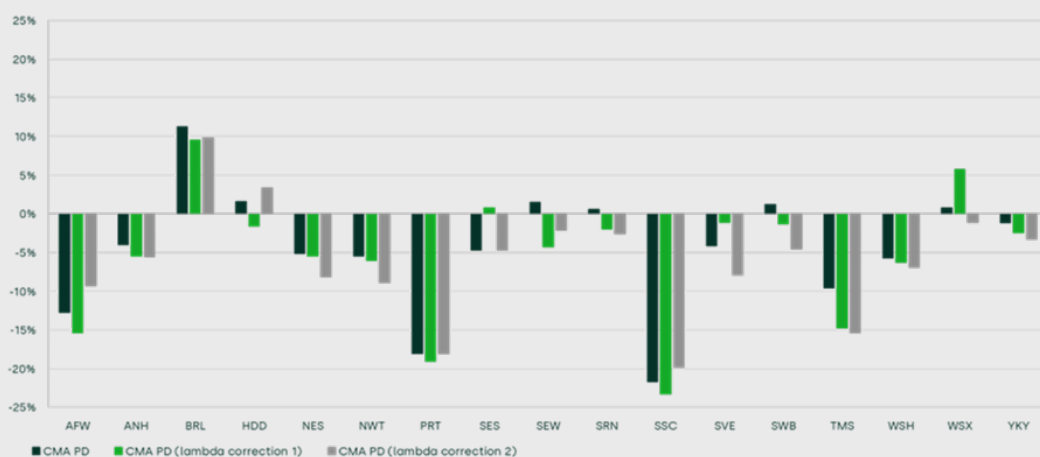
- The results are highly sensitive to dropping individual companies from the modelling sample, indicating that the model is capturing spurious relationships between cost drivers and noise/inefficiency. Dropping Thames Water from the wholesale wastewater modelling halves its efficient cost prediction by 45%, from £3,755m to £2,073m.
- The CMA deviates from Ofwat's well-established and supported approach to energy real price effects by including an energy price index in the cost models. Excluding energy costs from the CMA's modelling framework reveals that this is capturing a spurious relationship between energy prices and costs unrelated to energy, as the index is still selected. Including an index for coffee, tea and cocoa as a driver demonstrates this scope for spurious correlation - it outperforms the energy index in 'explaining' the increase in industry costs over AMP7 and is selected by the LASSO framework as an explanatory variable for TWD costs. Including the energy index in the models reduces industry cost allowances the industry by £1,271m (3.1% of modelled base costs).

- The CMA includes a regional wage variable in its models, which is either not retained within the LASSO framework (for WRP and WWNP costs), or is retained as a statistically insignificant variable (for TWD costs). This result would point to a finding that Southern's claim for a regional wage adjustment was not supported by the data, as Ofwat has identified previously. Instead, the CMA uses what amounts to a statistical 'non result' to justify removing a sector-wide risk protection from real labour price effects for two cost areas (WRP and WWNP costs) while retaining an uplift for TWD costs. The CMA does not explain why operations in TWD are subject to labour cost pressures, while those in WRP and WWNP in the same geographies, under identical company remuneration policies, are not. When the CMA's own 1se lambda rule is correctly implemented a further counterintuitive result is introduced—a negative relationship between costs and wages (i.e. an increase in wages implies a reduction in costs) is applied to wastewater costs.

- The CMA's PD modelling framework is sensitive to trivial issues, such as the order of variables that are entered into LASSO. That company funding allowances could be determined by a factor as arbitrary as the way in which a variable list is entered in a modelling file demonstrates the instability of the CMA's approach, and its inappropriateness for use in this context.

The results from LASSO deliver fundamentally different results from Ofwat's FD models for almost all companies. For example, the modelled cost prediction for South Staffs reduces by more than 20% and for the industry as a whole by 4.9% (pre Frontier-Shift). If assumed correct, this would imply that the CMA has identified a completely different relationship between costs at the industry and company level than Ofwat over the same time period and using the same cost data. Such a large and systematic deviation in outcomes is simply not plausible. The result that almost all companies should have significantly lower base allowances for AMP8 under the CMA PDs modelling approach is also not supported by the evidence that the industry overspent PR24 allowances by a significant amount during AMP7.

Figure 3: Gap between Ofwat's FD assessment of modelled base costs and the CMA's assessment of modelled base costs, pre-Frontier shift



Source: Oxera analysis

For this degree of change to be driven by such unstable models goes beyond a collection of technical and conceptual errors, it demonstrates a modelling framework that is fundamentally **not fit for purpose**.

The result of the new models for Anglian specifically is to exacerbate the funding gap which the Company already faces, with direct and negative impacts for performance, asset health and ultimately customers and the environment.

Accordingly, the models do not form a reasonable and credible basis for setting Anglian's base allowances at Final Determination. Anglian therefore requests that the CMA reinstate the Ofwat FD models and reconsider its analysis of Anglian's (and other companies') CAC claims.

1 Overview

(74) In this Chapter B.1, Section 2 summarises the weaknesses in, and consequences of the PD models, which fail to satisfy common sense-checks. Section 3 outlines relevant cost assessment principles and why the PD models conflict with these. Section 4 explains the lack of economic

and engineering rationale in the PD approach. Section 5 details critical robustness errors, while Section 6 sets out Anglian's procedural concerns. Finally, Section 7 sets out Anglian's proposed solutions.

2 Summary of material model concerns

2.1 The PD models are inconsistent with operational, economic and engineering rationale, and are not statistically or econometrically robust

(75) First, it's important to note that the execution of the PD LASSO model does not achieve two important effects.

(i) The CMA states (rightly) that explanatory variables should be plausibly related to costs. However, it does not describe adequately how it has ensured that the direction and magnitude of the relationships are consistent with operational rationale and indeed has failed to ensure this (as explained below).

(ii) Second, the PDs state the models provide a "*better basis to estimate differences in efficiency between companies*" (PDs, ¶4.70). Anglian agrees that the objective of base cost modelling in this context is to predict efficient, not solely observed costs (consistent with the consumer and efficiency duties). However, methods like LASSO prioritise maximising explanatory power and risk 'overfitting' i.e. optimising fit to historical costs whether or not they were efficient.

(76) These issues have compounded each other, as failure to sufficiently check whether relationships align with economic and engineering rationale risk producing models that are not good predictors of future efficient costs. This has occurred at the PD, as the models fail key engineering sense-checks, meaning that the PDs currently do not achieve these stated intentions. Therefore, they have resulted in allowances that are inconsistent with the efficiency, resilience, consumer and other duties.

(77) The PD states that its cost drivers have an economic and engineering rationale (PDs, ¶4.37). However, the PD models produce a number of unjustified or counterintuitive results (see Section 4.ii and 4.iii) and there is no evidence of (or at least no transparency around) the CMA's engineering

advisors' (WRC) input into the base model inputs or on the outcomes' engineering rationale.

- (78) Poor econometric and statistical robustness compounds these issues (as discussed in Professor Kumbhakar's (Annex 001) report and set out in Section 5.⁵

2.2 The outcome of the PD models results in an unjustified and unrealistic cut in base cost funding for Anglian (and the industry)

- (79) The above issues matter. The PDs reduce Anglian's total water and wastewater base allowances by £66m (and pre-Frontier shift modelled water and wastewater base allowances by £152m⁶) relative to the Ofwat FD. Across the industry, the PDs reduce modelled water and wastewater base allowances by £1.3bn post-Frontier Shift (and by 4.9%, or £2,052m pre-Frontier Shift).
- (80) This gap grows materially once a technical error in how the CMA has calculated lambda is corrected – namely its error in implementing the 1se rule. The outcome of correcting for this error depends on whether the CMA would retain its stated policy to select models based on optimal model fit.⁷ Correcting the CMA's error mechanically, without making any other changes, would increase the gap between Anglian's PD and Ofwat FD total water and wastewater base allowances to £117m. Across the industry, the equivalent correction to the PD would reduce modelled water and wastewater base allowances by £1.8bn post Frontier Shift (and by 6.3% or £2,630m pre-Frontier Shift). Going a step further and implementing the

⁵ This report and associated datapack (Annex 003) was submitted to the CMA by Professor Kumbhakar on 6 November 2025.

⁶ The CMA incorrectly cites a gap of £93m between its PD allowance and the equivalent Ofwat FD number (including RPEs, before frontier shift) for Anglian Water. CMA (2025), 'Volume 4, Chapter 9, Table 9.1'. This is based on an error in how the CMA has estimated a base allowance for the level of modelled costs including RPEs, net of frontier shift—once corrected the gap grows to £152m.

⁷ The CMA states its policy is to choose the level of aggregation that 'performs better empirically'—defined by the CMA as the level of statistical fit as measured by the Residual Mean Square Error. Prior to correcting lambda, the CMA chooses to model water costs with separate WRP and TWD models, on the basis of this approach. Once lambda is adjusted to correctly implement the 1se rule, modelling water costs in aggregate would better explain water costs—implying that if the CMA were to retain its policy that it should switch from separate WRP and TWD models to this aggregate model.

CMA '1se rule' after correcting lambda would lead to an even greater gap at the industry level – of £2,609m post Frontier-Shift (and by 8.1% or £3,379m pre Frontier Shift).

- (81) Compared to outturn expenditure over AMP7 on equivalent categories, the PD predicts that costs will reduce by 6.2% in AMP8 for Anglian Water, by 5.9% in AMP8 for the water industry as a whole and by 11.9% for the five DCs. The CMA provides no clear rationale for these reductions, beyond a modest decrease in forecast energy prices (10% lower on average in AMP8 versus AMP7, affecting c. 13% of the cost base), or consider their implications against the evidence that nearly all of the industry overspent base allowances in AMP7 – by £8,567 million) (ANH SoC, ¶148).
- (82) No analysis or explanation is given for the implication of the CMA's modelling approach that the water industry as a whole was overfunded in the base models by as much as 4.9% in AMP7 or 8.1% at the Ofwat FD for AMP8. The PDs do not explain how their modelled outcome is achievable nor consistent with wider perspectives of the sufficiency of base costs and their ability to support long-term asset health and resilience. It appears to wrongly assume that such a dramatic reduction in modelled base allowances will not have a detrimental impact on operational and service performance for current and future customers. Nor has the CMA appeared to cross check or calibrate how the significant disallowances in base impact on the risk/return balance of the PD package (eg. in its removal of wages as a model cost driver in WRP and WWNP with no adjustment for ex-ante future costs) particularly as regards ODIs penalties, or indeed what the implications will be for asset health.
- (83) Further, and vitally, the PDs do not explain why they consider this outcome to be reasonable for Anglian and an appropriate level of stretch, nor why they consider that Ofwat has in fact over, rather than under-funded Anglian's base allowances given strong evidence to the contrary.

2.3 Conclusion

- (84) Stepping back, for the PDs' modelled base allowances to be reasonable for Anglian, it would need to be the case that:

- (i) Ofwat's cost assessment models likely overfunded Anglian's modelled allowances by at least 4% (wastewater) and 6.3% (water) despite both Ofwat and the CMA finding Anglian to be an efficient operator and despite (to Anglian's knowledge) no third-party submitting to the CMA that Anglian has been overfunded on base.
- (ii) For c. 65% of companies, the Ofwat FD overfunds companies base - one by up to c. 22% on modelled base allowances.
- (iii) The industry has been systematically overfunded (c. 5% on average across modelled base allowances) despite nearly all companies (15 out of 17) over-spending PR19 modelled base funds.
- (iv) Given the disproportionate impact of base funding reductions for capital maintenance spend (owing to the large percentage of other base spend that is non-discretionary) (ANH SoC, ¶200) an in practice 22% squeeze of Anglian's overall capital maintenance allowance as a result of statistical econometric analysis previously never deployed for determining a UK price control, is the right outcome. This despite the PD's recognition that there is a "*pressing need*" (PDs, ¶4.235) for action on the "*crucial issue*" of asset health, the widespread evidence from third-parties on the scale of asset health concerns,⁸ and the concerns expressed by the IWC that the regulatory regime "*is not delivering a sufficiently resilient system to tackle both short-term shocks and long-term pressures*", the need for "*funding for asset assessment, replacement and renewal*" to be "*assessed through a longer-term lens*"⁹ and the IWC's finding that "a

⁸ See for example, submissions to the CMA by [The Rivers Trust](#), page 1, para. 3; [Water UK](#), page 4, para 4, as well as the experience of [Alan Sutherland](#) drawn from the action taken to address asset health challenges by WICS, as well as the evidence in Anglian's Statement of Case on concerns expressed by the NIC, Reckon and Defra, Anglian, PR24 Statement of Case (21 March 2025), page 82 (para. 326) (see [here](#)).

⁹ Independent Water Commission, Final Report (21 July 2025), pages 379-380 (paras. 887 and 889) (See [here](#)). See also concern over the impact of the Price Review, including a recommendation that "*We are also proposing changes to the Price Review process that include new mechanisms to make sure sufficient funding is dedicated to asset maintenance*" (page 7); "The current regulatory approach to infrastructure resilience is not delivering a sufficiently resilient system to tackle both short-term shocks and long term pressures" (page 877)

data-driven econometric approach” has been too heavily relied upon.¹⁰

- (85) Anglian submits that there is no credible basis for this view given (i) widespread evidence to the contrary from both the Disputing Companies and third parties and (ii) the fact the PD models do not achieve the objectives of identifying efficient costs and plausible cost drivers.
- (86) The practical consequences of Anglian’s base spend reductions for performance and asset health are inconsistent with the consumer, efficiency and resilience duties. The approach also conflicts with regulatory principles of proportionality, regulatory consistency, targeted action only where it is needed and transparency.
- (87) Anglian therefore submits that the PD base models are not supported by a sense-check of the outcomes, are compounded by critical substantive mistakes (Sections 4-5, below) and procedural weaknesses (Section 6, below). The PDs therefore reach the wrong outcome, by employing the wrong methodology and following the wrong process. In doing so they exacerbate outcomes (asset health and use of econometric theory at the expense of on-the-ground realities) for the industry on key metrics of focus in the IWC review.

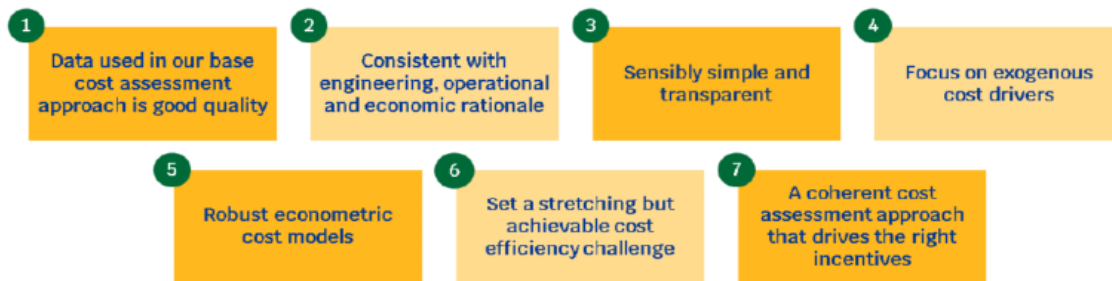
3 The CMA’s PDs are inconsistent with Ofwat’s base cost assessment principles

- (88) The PD states that its models “*build on*” the foundations of the Ofwat models “*developed over a long period and extensively consulted on*” and that it has “*sought to work with the grain of Ofwat’s PR24 FD approach*” (PDs, ¶¶ 4.45 and 4.47).¹¹ Instead, however, the PD’s outcome: (i) is inconsistent with many of the core principles of the PR24 base cost assessment (Figure 4 below); and (ii) is lacking in sensible sense-checks of whether these principles have been met.

¹⁰ Independent Water Commission, Final Report (21 July 2025), pages 379-380 (paras 417) (see here).

¹¹ Competition and Markets Authority, Water PR24 References Provisional Determinations Volume 1: Introduction, Background, Approach and prioritisation, Base costs – Chapters 1–4 (9 October 2025), pages 49-50 (paras. 4.45 and 4.47) (See [here](#)).

Figure 4: Ofwat's Principles of PR24 Base Cost Assessment



(89) In particular, as Sections 4-6 below explain, the PD base models:

- (i) **Are not simple, transparent or consistent with engineering, operational and economic rationale.** Just some examples of the errors (detailed in *Section 4*) are: (i) failing to verify that model coefficients align with economic and engineering rationale (e.g. the non-rational outcomes of the PD models' view of the impact of density, water treatment work scale and water treatment work complexity on models as shown above); (ii) reversing established cost relationships without justification (e.g. on short-term wage impacts and density, as above); (iii) bias by omitting (and seemingly failing to examine) the relevance of variables beyond those advanced by two companies; (iv) inconsistent application of RPEs; (v) creating greater complexity in interpreting relationships with costs by using multiple duplicate variables for the same cost driver (eg. four density metrics in both water models/three density metrics in wastewater); (viii) departing from the well-established random effects estimator, that has been continuously used by the CMA and Ofwat since PR19 and thus ignoring persistent firm-specific characteristics that influence costs but are not directly captured by the cost drivers available.
- (ii) **Are not robust econometrically.** There are fundamental framework-level errors rather than isolated technical mistakes in the PD models. Just some examples (detailed in *Section 5*) are: (i) instability (as above), being hugely sensitive to change in number of companies, variable / time period choice, historical inefficiencies and

aggregation levels; (ii) creating bias by being highly likely to misdiagnose spend vs. efficiency, due to overfitting and lack of sound operational rationale for the framework; (iii) include statistically insignificant variables producing very significant reductions in industry allowances and deploying the wrong tests for statistical significance.

- (iii) **Do not set an achievable cost efficiency challenge.** The PD models impose an (at least) 4% and c. 5% modelled allowance stretch for Anglian and the industry respectively, which is unacceptable in light of the evidence before the CMA and when measured against sensible sense-checks (such as those in Section 1 above).
- (iv) **Are not a coherent cost assessment approach that drives the right incentives:** LASSO creates operational and planning uncertainties, volatility, and perverse incentives towards **mechanistic** minimisation of efficiency score spread regardless of actual efficiency scores (See Section 6 below).

4 The CMA's approach lacks engineering and economic rationale, increases complexity and is non-transparent

- (90) Section 4 explains why the outputs of the PD's model are operationally and economically unsound. This Section: (i) highlights general issues with the PD approach; (ii) assesses energy and wage modelling; and (iii) assesses modelling of the relationship between cost and density, water treatment economies of scale, topography and water treatment complexity.

4.1 General concerns with the CMA's implementation of a LASSO approach

- (91) The CMA characterises the LASSO approach as follows.
- (i) The approach starts from a set of potential explanatory variables that have both an economic and an engineering rationale.
 - (ii) The LASSO selects the set of variables that best predict the outcome of interest (in this case, base costs).

- (iii) The LASSO tends to drop variables that have no or low explanatory power, or that are highly correlated with other variables that have high explanatory power.
- (92) In the view of the CMA, the cases raised by two of the five DCs revolve around the *magnitude* of the effect of explanatory variables and whether adding or subtracting given variables improves the models' prediction (PDs, ¶4.37). The CMA sets out its assessment that '*This is exactly the type of problem that the LASSO approach is designed to solve, in a coherent and objective manner*' (PDs, ¶4.37).
- (93) Before turning to specific issues with the outcome of this process, the following overarching flaws with this rationale must be noted.
- (94) First, while the CMA is correct to note that an explanatory variable in a model of water industry costs should be plausibly related to costs, this is not sufficient by itself. The *direction* and *magnitude* of the relationship between cost and the explanatory variable must be consistent with this operational rationale. This was summarised well by the CMA in its PR19 redetermination, in which one of its criteria for assessing explanatory variables in the base expenditure models was '*[a]re the coefficients of the expected value and significance? We want to include variables where the coefficient is consistent with our understanding of how the variable should influence costs*' (PDs, ¶4.46). This aligns with Ofwat's PR24 base cost modelling principle of consistency with operational, engineering and economic rationale. By contrast, such a step is not described by the CMA in its approach to estimating efficient costs at its PR24 PD. While it does provide some narrative about some of the relationships it identifies,¹² limited information is given on the analysis the CMA undertook to assess whether the direction or size of the coefficient is correct. In several cases, the approach taken by the CMA to assess CACs by SEW or SRN appears to imply the opposite relationship to the one being put forward by the company. This is set out in sections 4.3.2 and 4.3.3 below.

¹² PD, Appendix. D.14 – D.18.

- (95) Second, the objective of base cost modelling is not to predict each company's costs, but rather to predict each company's *efficient* costs. Methods such as LASSO, that prioritise maximising explanatory power, instead optimise the fit of the model to historical observed costs—whether or not they were efficient or inefficient. Without sufficient checks as to whether the resulting relationship aligns with economic and/or engineering rationale, the outcome of a technique such as LASSO risks ‘overfitting’ the model—such that the resulting relationship between cost and explanatory variables is not a good predictor of future efficient costs. The trade-off with optimising model fit was summarised by the CMA in its PR19 redetermination as follows: “*The R-squared is a measure of how well the model can explain the data. Generally, a higher R-squared is preferable. However, this can be misleading because a too high R-squared may mean that the model loses its predictive power (this is known as overfitting).*”¹³ These comments are equally applicable to the CMA’s preferred measure of model fit in the PR24 proceedings, the Root Mean Squared Error (RMSE). As we set out in section 5 below, the extent to which the PD models are overfitted rather than identifying efficient costs is demonstrated by the instability of the resulting allowances to dropping individual companies—for instance if Thames is dropped from the sample its modelled allowance drops from £3,755m to £2,073m.
- (96) These two conceptual flaws compound one another. When final models are not sufficiently interrogated to ensure the relationship between cost and explanatory variables aligns with economic and engineering rationale during their development, it is critical that there are sufficient checks that the resulting relationships aligns with economic and engineering rationale. Moreover, departing from the status quo framework in favour of mechanistic statistical optimisation increases the risk of overfitting. This makes thorough ex-post assessment—verifying that the model remains consistent with underlying economic, operational and engineering

¹³ CMA PR19 Provisional Determination, footnote 200 (See [here](#)).

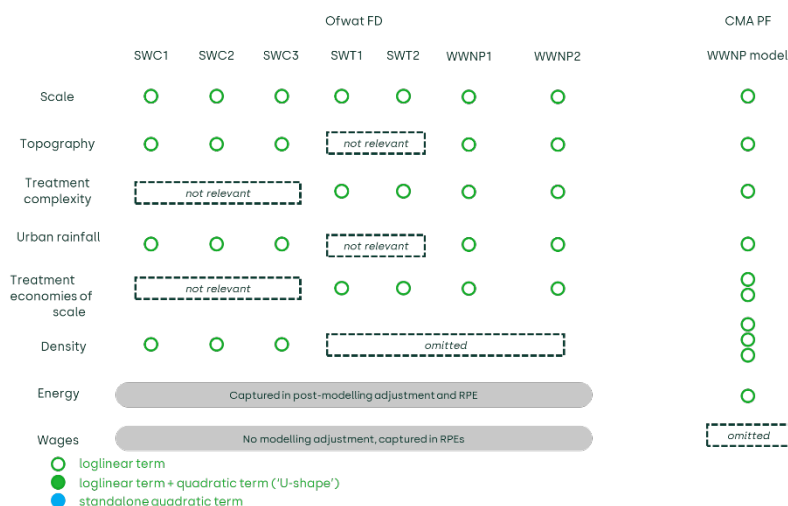
relationships—even more essential. This is the second principle underpinning Ofwat’s base cost modelling framework.

- (97) A foundation of the Ofwat process for model development has been consultation with industry, as referenced by the CMA “[...] we are aware that Ofwat’s approach to modelling has been developed over a long period and extensively consulted on” (PDs, ¶4.45). A key part of Ofwat’s consultation process is to facilitate engagement and interrogation of the relationships implied by the estimated coefficients – whether considered individually (for most variables) or in pairs (for density, represented by a single driver included with both a linear and a squared term) – to ensure these are consistent with engineering rationale.
- (98) The CMA’s models contain multiple alternative measures of the same driver to explain the same underlying cost driver. This can be valid in instances where different drivers are associated with different dimensions of the same problem. For example, many cost models suggested at various points by stakeholders in the sector are based on a ‘u-shape’ between costs and density which is modelled through the inclusion of a linear and a squared term.
- (99) Figure 5 and Figure 6 below set out how the PD models compare to Ofwat’s in terms of the number of variables for each underlying cost driver. This shows the number of variables within each model that capture a specific cost driver, specifying whether the relationship is modelled through a linear relationship (hollow green circle), a combination of linear and quadratic terms—or U-shape (filled green circle), or a standalone quadratic term (filled blue circle). While Ofwat’s models do include different variants of drivers such as topography and density across different models, each individual model contains only a single driver.

Figure 5: Structure of Ofwat's FD models of treated water distribution (TWD) models and water resources plus (WRP) models compared to the CMA's PD models



Figure 6: Structure of Ofwat's FD models of wastewater network plus (WWNP) costs, compared to the CMA's PD model



(100) Having multiple variants of the same cost driver in the same model presents challenges when assessing whether the implied relationship with cost aligns to engineering and/or economic rationale. For example, the CMA has four different density variables in its WRP model—one negative loglinear term and three positive quadratic terms. Understanding something as simple as whether this implies a negative or a positive relationship between costs and density requires further analysis to be undertaken. Despite the PD's intended effect of utilising a simpler

framework, this is a clear example of the simpler, and more transparent nature of Ofwat's models, where such relationships can be readily interpreted by stakeholders.

- (101) The CMA's PD models stand in sharp contradiction to its PR14 and PR19 redeterminations, which build on one another — with PR14 concluding that Ofwat's models were overly complex, and PR19 largely endorsing Ofwat's simpler set of models. It is on this basis that Ofwat, together with the wider industry, has legitimately developed its PR24 models:

"The CMA considered that Ofwat's PR14 econometric cost models were overly complex. This led to a set of models the CMA considered were challenging to interpret and produced counter intuitive results in some cases. We addressed the CMA's comments at PR19 by developing base cost models that were sensibly simple (without pursuing simplicity for its own sake) and captured the main cost drivers in each model. Companies generally supported the 'sensibly simple' modelling approach as it provided more transparency and clarity compared to PR14. This approach led to a set of models that the CMA supported and used to in the PR19 redeterminations".¹⁴

- (102) The complexity in the PD models is inconsistent with the CMA's characterisation of its approach as '*considerably simpler (and therefore more transparent) than the suite of models used by Ofwat in its PR24 FD*' (PDs, ¶4.57). The PD has not achieved this intended effect. While Ofwat used more models than the CMA in its PR24 FD suite, the direction of the implied relationship between each cost and cost driver could be readily understood from each model. Moreover, as the CMA notes, Ofwat has been consulting on these models (or variants) and the implied relationships for several years (PDs, ¶4.45). By contrast, extensive analysis is required to unpick many of the relationships characterised by the CMA's new model specification to assess whether they align to economic and operational intuition, with insufficient opportunity in the process to do so.

¹⁴ Ofwat, Assessing base costs at PR24 (December 2021), page 15 (See [here](#)).

(103) To summarise, the CMA's models appear to have been developed without sufficient checks to interrogate what the estimated coefficients actually mean and whether these – considered individually or collectively – reflect established intuitive relationships based on engineering rationale.

4.2 The relationship between costs and input prices (energy and wages) is inconsistent with operational rationale

4.2.1 The CMA's approach at the PD

(104) The CMA's approach contains two obvious flaws that make its findings unrealistic. First, it identifies a spurious relationship between costs and energy prices within its base cost models, which has the effect of also capturing other unintended cost increases that are entirely unrelated to energy price movements. Second, it reaches the conclusion that wage pressures are not relevant to the majority of water companies' cost bases (and therefore removes a key risk mitigation protection). This finding directly contradicts the well-established consensus between Ofwat and the water companies themselves that wage pressures constitute a relevant and material cost pressure that requires appropriate adjustment.

(105) Under Ofwat's PR24 regime, water companies are protected from general increases in input prices through CPIH indexation. Ofwat applies an additional adjustment for 'real price effects'—input prices that are less well correlated with CPIH. Ofwat makes an RPE allowance for the difference between CPIH and an independent price index where cost pressures are material and driven by external, macroeconomic or supply factors that the water companies cannot control.¹⁵

(106) At PR24, RPE adjustments were made to base allowances for two factors—energy prices and labour costs (wages). Ofwat's approach was to apply an ex-ante uplift to allowances based on the expected divergence between energy price¹⁶ and wage¹⁷ index forecasts and CPIH projections.

¹⁵ Ofwat, PR24 final determinations: Expenditure allowances (February 2025), pages 268-269 (see [here](#)).

¹⁶ The Department for Energy Security and Net Zero (DESNZ) energy price index for large industrial users.

¹⁷ The ONS manufacturing wages index.

For energy prices, this was supplemented by an additional energy price adjustment to reflect the fact that recent elevated energy price levels are only reflected in the last three years of outturn data.¹⁸ This was then reconciled, or 'trued-up' at the end of the PR24 period.

- (107) Disputing Companies did not raise concerns with Ofwat's PR24 approach to RPEs. However, Southern Water put forward two issues in its Statement of Case that relate to these pressures.
- (108) The first was that the way in which Ofwat had applied its energy price adjustment did not reflect Southern's specific hedging strategy. Southern submitted that its energy price hedging arrangements had suppressed its AMP7 energy costs by more than other companies. As such, Southern argued that Ofwat's approach to making an energy adjustment, which used the last five years of data to extract power cost shares relative to BOTEX for each company, forming the basis of post-modelling adjustments and eligible for RPEs, alongside the glidepath used, led to it being underfunded for its energy costs. Note that Southern did not raise concerns with the general framework that Ofwat had applied, rather its specific application to Southern's costs.
- (109) The second was a claim that Southern faced exceptional wage pressures that were not well captured within the existing modelling framework. Among two different methods for accounting for these pressures via pre or post-modelling adjustments, Southern also proposed including a wage index as a driver in the econometric models.
- (110) The CMA's PD aims to address both of these claims by including the following variables within the cost driver list that LASSO can select from:
 - (i) the national energy price index used by Ofwat interacted with the length of water mains (as a potential cost driver for WRP and TWD costs);

¹⁸ CEPA economics matters, PR24 Draft Determinations Frontier Shift, Real Price Effects and the energy crisis cost adjustment mechanism (28 June 2024), page 22 (See [here](#)).

- (ii) the national energy price index used by Ofwat interacted with pumping capacity (as a potential cost driver for WWNP costs);
 - (iii) company-specific wages interacted with the length of water mains (as a potential cost driver for WRP and TWD costs);
 - (iv) company-specific wages interacted with the volume of load treated (as a potential cost driver for WWNP costs).
- (111) The energy price variable is selected by the LASSO procedure for all three cost models (WRP, TWD and WWNP), while the wage variable is selected by the LASSO procedure for the TWD cost area only. On the basis that it has assessed the variables in its modelling selection process using LASSO, the CMA determines that it is not necessary to apply an additional ex-ante RPE adjustment, whether or not these variables are ultimately selected by the LASSO and used in the models. It is unclear whether or how the CMA proposes that an ex-post cost true-up would operate.
- (112) The CMA's approach has two obvious flaws rendering its findings unrealistic:
- (i) It finds a spurious relationship between costs and energy prices in its base cost econometric models, also capturing other unintended increases in costs unrelated to energy.
 - (ii) It concludes that wage pressures are not relevant to a majority of water companies' cost base – contrary to the established consensus between Ofwat and water companies that this is a relevant cost pressure.

4.2.2 Energy prices

- (113) By using its LASSO approach to determine whether energy prices are controlled for, and the magnitude of this effect, the CMA's approach is reliant on the statistical relationship between costs and energy prices. This is not adequate, for two reasons.
- (114) First, variation in energy prices affects each company differently at a given point in time due to different contractual arrangements and hedging

strategies. For instance, a 50% increase in energy prices in year N might raise Company A's energy costs by 50% in-year, but have no effect on Company B in that year as a result of its hedging arrangements.

(115) Ignoring this reality, the PD takes a single concern from one Disputing Company, Southern – unrepresentative power cost shares relative to BOTEX due to SRN's hedging arrangements – to create a sector-wide change impacting every company. In doing so, it bundled together all these different contractual and inherently bespoke hedging arrangements in a modelling approach aimed at identifying a uniform year-on-year relationship between the energy index and companies' *total* costs, of which power costs are only a subset. In addition to not capturing companies' power cost trends effectively, because companies are impacted at different times by fluctuations in energy prices, this approach also introduces noise into the relationships between other variables and costs. While Anglian is not best placed to assess the validity of SRN's £48m energy CAC, it notes that, all else being equal, the inclusion just of the energy index in the modelling resulted in the CMA 'granting' a negative £78m CAC to SRN, leaving the company with a £116m shortfall on energy compared with £48m at the FD. This appears to fail a basic sense check.

(116) In Table 1 below Anglian shows the correlation between companies' energy costs in AMP7 and the price index used by the CMA. It can be seen that, while some companies' costs are highly correlated with the index used, a number of companies have low, or in one case a negative, correlation with the energy price index.

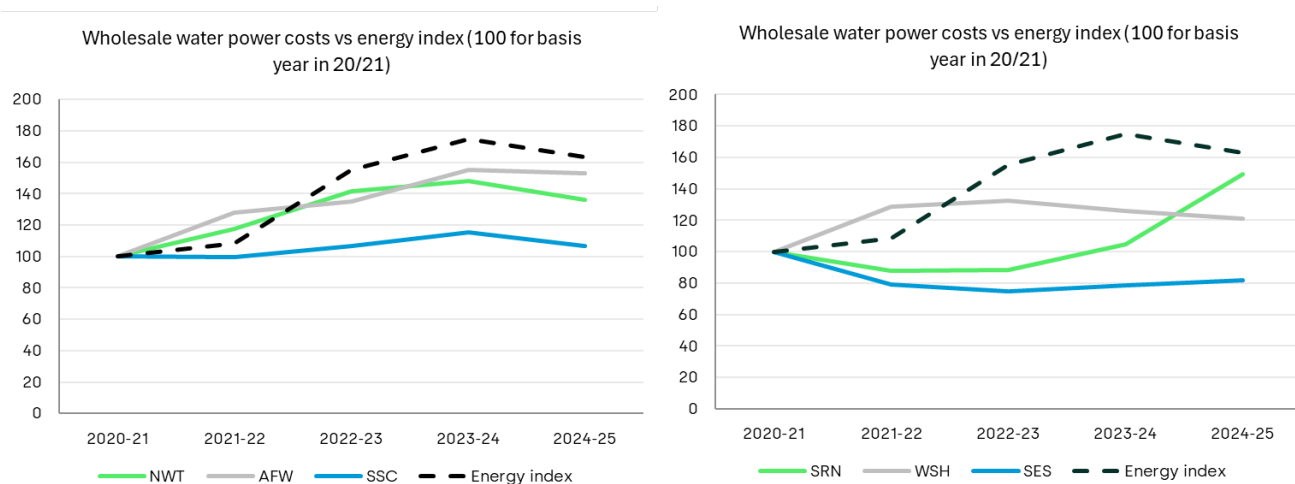
Table 1 Wholesale water energy cost and energy price index correlation

Company	Correlation between company-specific wholesale water energy costs and the energy price index
ANH	0.73
HDD	0.81
NES	0.88
SRN	0.43
SVE	0.86
SWB	0.89
TMS	0.84
NWT	0.96

WSH	0.55
WSX	0.89
YKY	0.84
AFW	0.90
BRL	0.77
PRT	0.77
SES	-0.65
SEW	0.81
SSC	0.91

(117) In the chart below, Anglian show how this relationship differs graphically between the companies with the highest (NWT, AFW, SSC) and the lowest (SRN, SES, WSH) correlation observed in the sample. This poor relationship weakens the models' ability to accurately capture the relationship between underlying energy prices and water company costs. This causes the CMA's estimation of this relationship to fail a statistical significance test at the 10% level in the water resources plus model, despite energy costs representing a higher cost share of WRP than TWD costs.¹⁹ The higher statistical significance in the TWD model is spurious, resulting from a larger increase in non-energy costs compared with WRP activities.

Figure 7: Wholesale water power costs vs. energy index



(118) The CMA's approach also introduces scope for differences in underlying company hedging strategy to be misattributed to inefficiency/efficiency. Companies' whose hedging strategies suppressed their energy costs

¹⁹ Kumbhakar S (2025), 'A review of the Competition and Market Authority's use of LASSO in the PR24 redeterminations', November, section 3.1.

relative to the index will appear to have ‘underspent’ over the last five years, relative to the level of costs predicted by the CMA’s model. If this influences the assessment of upper quartile efficiency over the 5-year benchmark period, this risks overstating the degree of the catch-up target on companies’ costs.

- (119) Second, the CMA risks spuriously relating recent increases in energy prices with other cost pressures that have increased over the same period. The majority of variables available to be used in cost models relate to company-specific cost drivers that do not vary significantly over time—such as company size, density and topography. In this context, the introduction of any explanatory factor that varies over the modelling period may ‘pick up’ unrelated changes in costs that have coincided over the same time period.
- (120) Oxera has tested this spurious relationship by running cost models *excluding* energy costs using the LASSO procedure, retaining the option for the model to select the energy price index as a driver. Contrary to operational rationale, when energy costs are excluded from BOTEX, Oxera finds that the energy index *is still selected* in both water and wastewater models, with a consistent positive sign.²⁰ This indicates that the energy price variable in the CMA’s model is acting as a general ‘recent cost pressures’ control variable, rather than capturing the impact on energy prices.
- (121) Indeed, simply including a time trend alongside the energy index renders the energy index statistically insignificant. That suggests it is not driven by anything specific to energy prices.
- (122) The spurious and misleading nature of the relationship captured by the energy index can be further demonstrated by replacing it with other random variables unrelated to water company activities, such as the CPI for coffee, tea, and cocoa, which similarly coincide with increases in companies’

²⁰ Annex 002, Oxera Datapack for Chapter B1: ‘Water variable selection - BOTEX without power costs.xlsx’ and ‘Waste variable selection - BOTEX without power costs.xlsx’ in Oxera datapack.

broader base costs. All of these irrelevant commodity prices perform significantly better than the energy index in all models.

Table 2 P-values and associated statistical significance of cost drivers capturing the increase in companies' base costs over time

	Energy index	CPI for coffee, tea, and cocoa
TWD cost model	P-value of 0.074, indicating a statistical significance at the 10% level	P-value of 0.015, indicating a statistical significance at the 5% level
WRP cost model	P-value of 0.29	P-value of 0.16
WWNP cost model	P-value of 0.073, indicating a statistical significance at the 10% level	P-value of 0.035, indicating a statistical significance at the 5% level

Source: ONS data.

(123) When applying the CMA's variable selection process in the LASSO, the CPI for coffee, tea, and cocoa is selected in both WWNP and TWD models. The energy index is still selected in the WWNP model but it is dropped in the TWD model. AMP7 has seen both an increase in energy prices *and* a number of other factors that have driven up water company non-energy costs. These have included:

- (i) the chemical costs paid by Anglian have nearly doubled and its outlay on equipment, tools and materials has increased by over 40%.
- (ii) increases in costs to meet higher levels of service quality performance, such as leakage costs and supply interruptions;
- (iii) growing pressures on capital maintenance budgets as the asset base ages—such as the replacement of growing numbers of boundary boxes in Anglian's case.

(124) A simultaneous rise in energy prices will 'explain' these cost pressures statistically but this is coincidental and will lead to serious consequences should these costs cease to move together. Energy prices are expected to fall, but these other costs are not. So a model that misattributes these cost

pressures to the energy price index risks producing downwards biased projections of future industry cost levels.

- (125) This danger was clearly identified by CEPA in its report commissioned by Ofwat prior to its draft determinations. Indeed, CEPA assessed three different approaches to energy adjustment for AMP8 and concluded that a post-modelling adjustment was the most appropriate in this context, noting the risk of capturing “*unintended increases in costs in more recent years*” if energy were included as a cost driver in the models.²¹
- (126) “However, *while an energy cost driver may capture energy price increases over time, it has the potential risk to also capture unintended effects. This is especially the case in the water sector where base costs are increasing over time, for reasons other than changes in energy input prices (increasing actual base costs over time are not well justified and/or explained by the base cost models and may represent inefficiency). Therefore, including the energy price index seems to capture spurious correlation (rather than causal effects) and unintentionally serves as a time trend variable, capturing other cost increases over time unrelated to energy. Therefore, we do not recommend including an energy index driver in the base cost models.*”²²
- (127) The spurious nature of the relationship identified, and its conflation with individual company hedging strategies is also demonstrated by the sensitivity of the coefficient on energy prices to small changes in the underlying data. As set out in Professor Kumbhakar’s expert report, simply dropping one company from the sample can lead to the relationship between company costs and the energy index **changing by 250%**. This, alongside the issues set out above, provides strong evidence that the CMA’s model has failed to isolate the impact of energy prices on company costs.

²¹ CEPA economics matters, PR24 Draft Determinations Frontier Shift, Real Price Effects and the energy crisis cost adjustment mechanism (28 June 2024), page 29 (See [here](#)).

²² CEPA economics matters, PR24 Draft Determinations Frontier Shift, Real Price Effects and the energy crisis cost adjustment mechanism (28 June 2024), page 30 (See [here](#)).

(128) The CMA provides no operational or economic rationale to explain why its approach to modelling costs and energy prices is legitimate or how it overcomes the problem highlighted by CEPA. Nor has it provided an assessment of whether the outcome of energy prices in the modelling has an appropriate result. It has also failed to explain why it interacts energy prices with a scale variable – meaning that larger companies are modelled as being proportionately more affected by energy prices than smaller companies in a model which already controls for company scale.²³ This is a material issue for Anglian and the other DCs. Indeed, the flawed approach implemented by the CMA results in an artificial £287m reduction in base cost allowances for all DCs, including £78m for Anglian specifically, within a £1,271m reduction for the sector as a whole.²⁴

4.2.3 Labour prices

(129) The CMA assesses Southern Water's CAC by including a regional wage variable within the list of cost drivers that its LASSO model can select from. The wage variable is selected by the LASSO procedure in the TWD model, while it is not selected by the LASSO procedure for explaining costs in WRP and WWNP. Within the TWD model, the wage variable is reported by the CMA to be statistically insignificant, even at the 10% level. In fact, when performing the correct statistical significance test using clustered standard errors the result is not even statistically significant at the 45% level, as shown in Table 8 of Professor Kumbhakar's report (Annex 001).

(130) The implication of the CMA's modelling appears to be that the wage level is *not* found to be a relevant explanatory variable to explain differences between company costs. This suggests that Southern's claim was without merit, and in fact the existing Ofwat approach to make a sector-wide adjustment for labour price effects was fit for purpose. However, rather than reverting to Ofwat's established methodology for accounting for future general wage pressures through an RPE adjustment (implicitly endorsed

²³ Kumbhakar S (2025), 'A review of the Competition and Market Authority's use of LASSO in the PR24 redeterminations', November, p.13.

²⁴ Annex 002, Oxera Datapack for Chapter B1. See file 'Summary impact energy.xlsx' in Oxera datapack.

by the CMA as recently as its redetermination in PR19), the CMA instead retains its models with either a statistically insignificant or no control for wages without making any ex-ante adjustment for forecast labour costs.

- (131) The CMA's approach significantly departs from both CEPA's and Ofwat's positions during the PR24 process, which identified labour costs as the most material expenditure category over which companies have no control in the short term, and where there are significant and material risks of divergent trends between labour costs and CPIH. Ofwat's analysis of company data finds that the labour cost share is 33.5% in base wholesale water and 36.4% in base wholesale wastewater and, as it stated in its draft determination:²⁵

"Labour costs are over a third of total expenditure and are the most material expenditure category. In the short term, labour prices are largely outside of company control given companies operate in a competitive labour market, and the difference between CPIH and wage growth can be significant."

- (132) This formed the basis of Ofwat's labour RPE for PR24, with an ex-post true-up between forecast and outturn wage growth using the ONS ASHE manufacturing wage index.
- (133) Other than observing that the variable is not selected by its LASSO procedure, the CMA provides no operational or economic rationale to explain why this material share of companies' cost base is not subject to input price pressure. Specifically, the CMA does not explain why operations in TWD are subject to labour cost pressures, while those in WRP and WWNP in the same geographies, under identical company remuneration policies, are not. Nor does it explain the basis on which it appears to have removed a key risk protection for companies, and how it has adjusted for the implications of this for the risk/reward balance.

²⁵ Ofwat, PR24 draft determinations Expenditure allowances (July 2024), page 140 (See [here](#)).

- (134) Given the materiality of labour costs in the sector and the risk of deviations from CPIH, the position adopted by the CMA in its PDs is not supported by evidence and clearly flawed.

4.3 Other problems with the CMA's econometric models

- (135) This section outlines other concerns with the interpretability and intuition of the econometric models published by the CMA, namely:

- (i) The relationship between cost and density.
- (ii) The relationship between cost and water treatment works size.
- (iii) The relationship between cost and topography.

- (136) First, commentary is provided on the CMA models as published in the PDs, and second any additional issues once we have corrected for the CMA's error in how it estimated the lambda parameter.

4.3.1 The relationship between cost and density

- (137) The CMA included all of the density variables used across Ofwat's modelling suite as potential explanatory variables for its LASSO selection process. Different combinations of these variables were retained or dropped in the different models put forwards by the CMA.

- (138) In the CMA's TWD model, the relationship between cost and population density in the treated water distribution model is explained by one quadratic density relationship (LAD from MSOA, weighted average density) and two additional standalone squared density terms. The CMA does not provide any assessment as to whether the collective impact of these variables aligns with economic or engineering rationale.

- (139) The CMA does not describe how its model aligns with the view taken by much of the industry on this relationship, as set out by Ofwat: *"All the water models include density and density squared to capture the so called "u-shape" relationship between density and costs. Companies in very densely populated areas face higher costs, and companies in very sparsely*

*populated areas face higher costs.*²⁶ Nor is the ‘net’ impact of density readily interpretable from reviewing the coefficients in the CMA’s model.

(140) The relationship between cost and population density in the water resources plus model is explained by one quadratic density relationship (properties per length of mains), one additional linear density term (LAD from MSOA, weighted average density) and one separate, standalone squared density term. The CMA’s engineering and economic rationale of these variables is as follows: “*Spatial population metrics again appear, with similar patterns to those in the TWD model.*” It is unclear from the CMA’s description what this pattern is, how it has been assessed to be similar to those of the TWD model or how it is legitimate for either TWD or WRP costs.

(141) Table 3 below sets out the coefficients for density variables in each of these models—many of which are only present in one model. Those present in both models differ in magnitude by a factor of 3 to 83.

Table 3 Density (‘spatial population metric’) variables in the CMA’s PD WRP and TWD models

	TWD	WRP
LAD from MSOA - Weighted average density (log)	- 2.280	- 0.500
LAD from MSOA - Squared weighted average density (log)	0.158	N/a
MSOA - Weighted average density (log)	N/a	N/a
MSOA - Squared weighted average density (log)	0.031	0.088
Properties per length - Weighted average density (log)	0.040	3.309
Properties per length - Squared weighted average density (log)	N/a	- 0.563

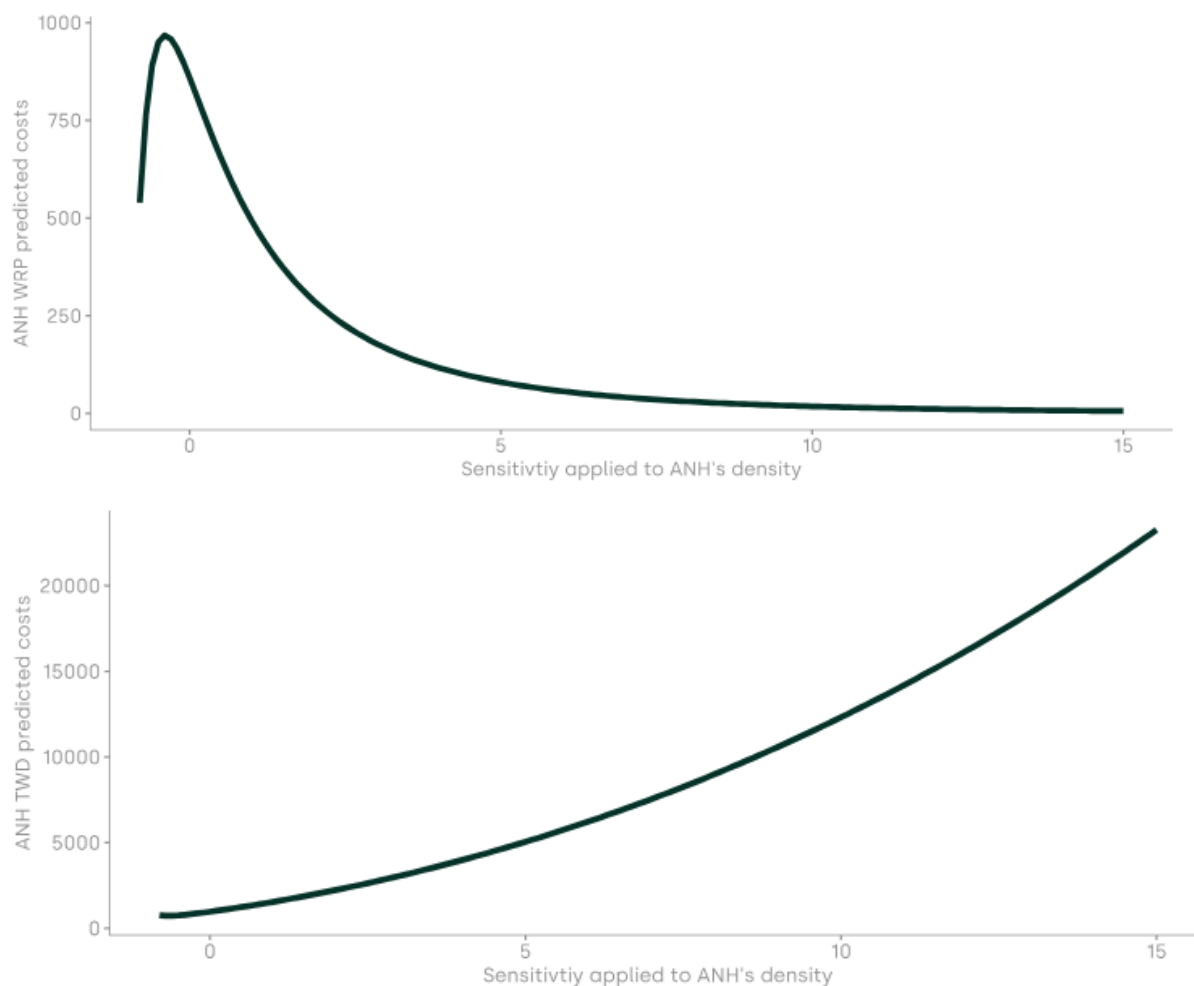
(142) Figure 8 and Figure 9 below assess the net relationship between cost and density implied by the CMA’s model across these different density figures. Taking Anglian as a representative company, this shows how the cost prediction for a company with Anglian’s characteristics would vary if it had a different level of density. This relationship is plotted for the full range of density available in the CMA’s dataset.²⁷ This approach shares

²⁶ Ofwat, PR24 redeterminations Expenditure allowances – common issues (April 2025), page 38 (para. 2.105) (See [here](#)).

²⁷ We evaluate density relative to Anglian’s position (marked as 0) and explore the partial impact of simultaneously increasing or decreasing each of the 3 underlying density variables by 1% at the same time. For example, the

characteristics with the CMA's decomposition of explanatory variable effects in its models at the PR14 re-determination.²⁸

Figure 8: Net relationship between cost and density implied by PD model



(143) The following are noted:

- (i) In the CMA's WRP model, costs and density have the opposite relationship to the CMA's TWD model.
- (ii) The relationship between cost and density modelled by the CMA is inconsistent with the 'U-shape' identified in Ofwat's FD models in both the TWD and WRP cost areas.

point marked '5' shows the impact for a company with 5 times higher density than Anglian. The total range shown is informed by the full spread of density across the variable with greatest variation in the sample.

²⁸ Competition and Markets Authority, Bristol Water plc price determination Provisional findings (10 July 2015), pages 91-92 (See [here](#)).

- (iii) A similar U-shape has been a feature of Ofwat's modelling of density in both TWD and WRP modelling throughout the PR24 process, since its modelling consultation. A similar U-shape was also modelled by Ofwat in its PR19 final determination and by the CMA in the models it developed in response to the PR19 appeals.
- (iv) Anglian is not aware of any Disputing Company raising a concern with relation to the relationship between costs and density in either the Ofwat TWD or WRP modelling suites.

4.3.2 The relationship between costs and water treatment works economies of scale

- (144) The CMA's WRP model estimates a positive relationship between water treatment works size and costs—i.e. finding that lower costs would be incurred to operate larger water treatment works. The CMA's assessment of this relationship is that "*The average volume per WTW and energy use is also included, with signs of the expected direction.*" The CMA does not expand on what its 'expectation' was. It is noted that in the PD the variable has been incorrectly transcribed with the opposite sign—which has since been acknowledged as an error in a note on the CMA's case page. It is unclear whether the CMA's assessment of this variable is based on the incorrectly transcribed coefficient of -0.08277 or the correctly transcribed coefficient of +0.08277.
- (145) The correctly transcribed value of +0.08277 implies the opposite relationship between cost and water treatment works size than the South East CAC that this variable has been included to assess (PDs, ¶4.8). The CMA characterises the case for South East's CAC as: '*South East submitted that Ofwat's models failed to capture the higher costs that it incurred on account of operating smaller water treatment works*' (PDs, ¶4.8). It also contradicts Ofwat's economic and engineering rationale for allowing South East's CAC at the PR24 FD.²⁹

²⁹ See Ofwat PR19 Base cost adjustment claim feeder model – South East Water, available ([here](#)) sheet("SEWCAC"), cell("D23").. Ofwat stated: "*All companies are to a certain extent affected by their (dis)ability to benefit from economies of scale at WTWs. [...] Additionally, from an engineering perspective, the size and*

4.3.3 The relationship between costs and topography in water

- (146) The CMA's cost models are also wrong as they only use two variables to capture the impact of topography in water—TWD average pumping head (APH) and the number of booster pumping stations per length of mains. In doing so, the CMA does not explain how it has accounted for the evidence that Anglian put forward to explain the issues in relying on the number of booster pumping stations to reflect topography (or network complexity).
- (147) When these alternative measures are included within the LASSO procedure, they are selected and used in the resulting cost models. These variables (booster pumping capacity per length of mains, WRP APH and total APH) perform equivalently well to the existing topography variables in terms of statistical significance and have a significant effect on base cost allowances across the industry—and for Anglian in particular (£83m).³⁰
- (148) In more detail, Anglian proposed considering the *capacity* of booster pumping stations, as this better captures the scale of a companies' overall pumping operations. Anglian also put forward average pumping head measures that better correspond to the segment of the value chain being modelled, stating:

“For completeness, Anglian notes the FD uses Treated Water Distribution (“TWD”) APH in both the TWD and total water cost models (Line 4 in Table 1). As it has previously argued, Anglian maintains that Ofwat should use only total APH in the total cost models. [...] Finally, if an additional driver to APH is to be used to triangulate models, pumping station capacity rather

location of water resources is a key determinant of the number and size of WTWs, more so than where population clusters are located. We (Ofwat) have checked the number of water resources (measured as sources per population served), and confirm that the company is in the top three in terms of number of water resources. This confirms that the size of the WTWs is largely outside of the control of the company. The company is also in the top three in terms of smallest WTWs size (measured as number of properties per WTW or water-WATS). The company now provides compelling evidence to justify the need for a cost adjustment due to density failing to capture the unique circumstance of the company”.

³⁰ See file 'Incomplete vs complete topography.xlsx' in Oxera datapack (Annex 002).

than number is a more relevant variable to capture pumping related costs.”

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(149) Beyond the CMA process, Anglian had previously expressed this position multiple times during the PR24 process, including in an annex to its business plan submission.³²

(150) It is therefore unexplained that the CMA started from an incomplete list of potential ‘topography’ drivers, and appears to have therefore failed to test WRP APH in both WRP and WW models, the capacity of booster pumping stations per length of mains in both TWD and WW models, and total APH in WW models.

5 The CMA’s modelling approach is wrong, lacking in robustness and intuition

(151) ‘Robust econometric cost models’ is one of the principles of Ofwat’s cost assessment framework (Box 5 in Figure 1). The following robustness issues are identified. These are also discussed in Professor Kumbhakar’s report.

- (i) The LASSO technique applied by the CMA reduces variance at the cost of introducing bias—systematic error from under/over-estimating the true effect of variables.
- (ii) The LASSO technique used by the CMA is poorly suited for predictions in a small dataset as LASSO’s variable selection becomes highly sensitive and unstable.
- (iii) The PD’s LASSO procedure is highly sensitive to small changes in the data—such as removing a company from the sample or adding an additional year of data.
- (iv) The PD’s LASSO procedure is highly sensitive to the starting list of cost drivers it can select from—yet only uses additional cost drivers

³¹ PR24 Redetermination Response to Disputing Companies’ Statements of Case (29 April 2025), pages 5-7 (See [here](#)).

³² Anglian, PR24 Base cost modelling and response to companies’ symmetrical cost adjustment claims (October 2022), page 3 (See [here](#)).

suggested by two Disputing Companies. Moreover, simply changing the order of the same variable list can lead to a different model outcome from the LASSO process.

- (v) The PD's LASSO procedure is highly sensitive to the selection of the tuning parameter λ —which is a subjective decision contrary to the CMA's characterisation that its application of LASSO is 'objective' (PDs, ¶4.47). The CMA has made an error in how it has implemented the '1se rule' for setting λ —once corrected, this significantly changes the resulting models. This demonstrates the high degree of influence this subjective parameter decision has, and the lack of transparency of this aspect of the base cost modelling framework set out in the PDs.
- (vi) The CMA has failed to account for the panel structure of the data in the estimator it has used, contrary to Ofwat's approach at PR19 and PR24, and the CMA's own cost modelling at the PR19 redetermination.
- (vii) The CMA has not accounted for correlation between company-specific residuals over time in how it has accounted for statistical significance. Once corrected for, as many as half of the variables in the CMA's models fail tests of statistical significance.

(152) These are addressed in turn.

5.1 The application of LASSO risks introducing bias in the context of a small dataset

(153) The CMA's application of LASSO introduces significant risk of bias by beginning with a substantially reduced variable set that includes only those variables from Ofwat's Final Determination models plus additional variables proposed specifically by South East Water and Southern Water.

(154) As set out by Professor Kumbhakar, LASSO produces biased estimates (in the statistical sense) by definition, while reducing variance. It is designed to balance a bias-variance trade-off. In simple terms, this trade-off is about finding the right balance between variance - how much the

results jump around if the data changes a little - and bias, which is the systematic error from under/over-estimating the true effect of variables.³³

- (155) The approach taken at the PD fundamentally departs from LASSO's intended purpose, which is most effective when applied to high-dimensional settings with many potential regressors. With the limited cross-sectional data in this case (only 19 water companies and 10 wastewater companies), LASSO becomes highly sensitive to random variation, creating instability where small changes in the data can lead to very different variable selections.
- (156) This instability means that the bias-variance trade-off central to LASSO can go wrong: while the method may slightly reduce variance, it can introduce substantial bias, making results unstable and predictions noisy—a problem exacerbated by the failure to account for unobserved company-specific heterogeneity that both Ofwat and the CMA have previously recognised as essential in regulatory benchmarking.

5.2 Sensitivity of the CMA's approach to small changes in the data

- (157) As demonstrated by several sensitivities in Professor Kumbhakar's report, the CMA's approach is highly sensitive to small changes in the dataset. These include:
 - (158) Coefficients in the models either reverse sign (i.e. produce the opposite relationship between cost and cost driver than in the CMA's PD model) or are dropped entirely when individual companies are dropped from the LASSO dataset. By contrast, for Ofwat's PR24 corresponding TWD, WRP and wastewater network plus models there is no instance in which the sign of an estimated coefficient is reversed if a company is excluded from the sample.
 - (159) For example, adding a single new year of data (2024/25) has a dramatic effect on wholesale water modelled base costs allowances—reducing by

³³ Kumbhakar, S. (2025), 'A review of the Competition and Market Authority's use of LASSO in the PR24 redeterminations', November, p. 4.

3.9% for wholesale water. By contrast, adding the same year of data to Ofwat's modelling suite reduces wholesale water cost allowances by 0.2%.

- (160) Cost allowances are highly sensitive to removing individual companies from the sample. For example, in the wastewater models set out in the CMA PDs, the difference between the lowest and highest cost allowances for individual companies when testing this sensitivity ranges by as much as 92% (Thames), 53% (Southern) and 43% (South West). In Ofwat's modelling, the highest range is below 10%.

Worked Example: Impact on Thames Water allowance of removing just one company

The cost prediction from the wastewater network plus models for Thames Water changes significantly when dropping individual companies (relative to the minimum cost prediction obtained). The CMA's models PD model predicts a modelled allowance of **£3,755m**. The cost predictions obtained when just one company is dropped range from **£3,988m** (when United Utilities is dropped from the sample, 6% above the PD model prediction) to **£2,073m** (when Thames Water itself is dropped from the sample, 45% below the model prediction). The highest figure in this range is almost twice (92% higher than) the lowest.

By way of comparison, Thames Water has spent between £728m to £778m p.a. on base costs over the last five years of cost data used by the CMA (2019/20 to 2024/25) – or £3,728m over the 5-year period.¹ An allowance of £2,073m would be less than the company's capital maintenance budget alone over the last 5 years, **£2,097m**.² This illustrates how the PD modelling framework is highly overfitted to individual companies in the sample—as demonstrated by its incapability of predicting an appropriate allowance for Thames Water when the company itself is omitted from the sample.

By contrast, Ofwat's FD models are considerably more robust to this test. Ofwat's FD modelling suite predicts a cost allowance of **£3,814m** for Thames Water. The range of cost predictions obtained when one company is dropped range from **£3,726m** (when Wessex is dropped from the sample) to **£3,903m** (when South West is dropped from the sample). The difference of £177m is *less than a tenth* of the £1,915m difference between CMA model predictions.

This suggests that the PD modelling framework cannot distinguish between efficient costs and the specific characteristics of individual companies in the sample, rendering its predictions unreliable for setting allowed costs in a price control.

¹ Ofwat (2024), 'Base costs – wastewater model 3 (Network Plus)', sheet(Modelled costs), cellrange(N129:N132), accessed on 8 November 2025 (see [here](#)).

² Ofwat (2024), 'Base costs – wastewater model 1', sheet(Stata dataset (real)), cellrange(BE106:BF110), accessed on 8 November 2025 (see [here](#)).

- (161) Furthermore, as the CMA will be aware from reviewing Ofwat's water and wastewater datasets, the weighted average density measures in Ofwat's base cost modelling rely on actual data only up to 2020/21. This means that three years of data were estimated by Ofwat based on company-specific trends. While this does not raise material concerns in Ofwat's base cost modelling, since these density measures have historically followed approximately stable trends, it creates a more significant issue under the CMA's framework, which relies mechanistically on a data-driven approach to select explanatory variables, including these estimated proxies for density trends.
- (162) This instability is particularly concerning, since three years of the density data the CMA's modelling relies on are merely Ofwat estimates. Small changes from the use of real data would likely have resulted in different model specifications, so the CMA's findings are heavily and unduly influenced by estimated data. Ofwat's base modelling is much less sensitive to such uncertainties. This result again fails a reasonable sense-check.

5.3 Sensitivity to the starting list of cost drivers

- (163) The starting variable set is critical in LASSO applications because the method can only select from among the variables initially provided—it cannot identify or include relevant cost drivers that were excluded from the outset. The CMA's decision to begin with only Ofwat's Final Determination variables plus those proposed by SEW and SRN represents a fundamental departure from LASSO's intended application, and from econometric best practice (as well as regulatory fairness, as the results unduly affect other Disputing Companies). LASSO is designed to be most effective in high-dimensional settings where the analyst starts with a comprehensive list of potentially relevant variables and allows the algorithm to identify which matter most.
- (164) This restricted starting point creates systematic bias in the modelling outcomes. Given the symmetric nature of most cost adjustment claims across the water sector, the CMA should have extended its variable list to

include a longlist of operationally relevant variables advanced at PR24. The exclusion of variables proposed by other companies means that cost drivers that might improve the relative efficiency position of other DCs, non DCs, or worsen the position of South East and Southern, are simply absent from the analysis. This asymmetry violates the principle the CMA itself acknowledges: that granting CACs to some companies without accounting for factors that affect others risks systematic over- or under-compensation (PDs, ¶4.38).

- (165) In addition to the inconsistencies noted above, as outlined by Economic Insight in its note sent to the CMA on 30 October, it is observed that the sequence in which variables are entered into the CMA models affects the LASSO results, producing different penalty parameters and ultimately altering the set of selected variables. This occurs when the list of potential variables is typed in a different order. Oxera have provided an example of this in the PD's WRP modelling—which shows that LASSO then selects different variables and consequently defines a different model and changed company cost predictions.
- (166) This occurs because, among correlated predictors, LASSO will arbitrarily retain one variable—depending on its position in the list—while excluding others, leading to model instability and randomly/unjustifiably increasing or decreasing the resulting AMP8 cost allowances for individual companies.
- (167) Such dependence is obviously an absurd outcome, with no real-world justification.

5.4 Sensitivity to the lambda tuning parameter

- (168) The λ tuning parameter is fundamental to LASSO's operation, as it controls the strength of the penalty applied to coefficient estimates and therefore determines which variables are retained in the model and which are shrunk to zero. When λ equals zero, there is no penalty and the model reduces to ordinary least squares; when λ is large, the penalty is strong and many coefficients are forced to exactly zero, effectively removing those variables from the model.

(169) The CMA sets out in its methodology that it sets λ based on the ‘1se rule’, rather than an assessment of whether the strength of this tuning parameter is appropriate. Note, for example, that the inclusion of five highly correlated density variables in the CMA’s WRP model might indicate that variables with limited additional predictive power are being erroneously included. Moreover, the CMA has implemented the 1se rule incorrectly. When this is corrected, the model specifications selected completely change, for example:

- (i) A wage variable is introduced with a negative sign in the CMA’s wastewater model—implying that companies operating in regions with a higher wage level face lower costs, all else equal.
- (ii) All three controls for density are dropped from the CMA’s wastewater model.
- (iii) The coefficient on weighted average complexity (a measure of the complexity of processes required to treat water) in the CMA’s WRP model switches from a positive sign to a negative sign—implying that companies that need to operate more complex treatment processes have lower costs
- (iv) The appropriate level of aggregation for the water cost area switches from separate WRP and TWD models to an aggregate water model.
- (v) The extent to which energy prices explain WRP costs is now found to have doubled, albeit the cost bases of water companies remain unchanged, with the estimated coefficient of the energy index inexplicably increasing from 1.3% to 2.6%.

(170) The impact on total industry allowances is significant—between £600m to £1,300m lower than the published allowances in the PDs, depending on how the corrected lambda is implemented.

5.5 Failure to account for the panel structure of the dataset

(171) The CMA’s LASSO approach treats data points from the same company for different years as independent observations, as if they were unrelated.

This is quite incorrect, as company-specific factors obviously persist (the data set as a 'panel structure'). Ofwat's models recognise this feature of water industry data and use it; by ignoring it the CMA's approach can produce results that are biased and inconsistent.

(172) The CMA's application of standard LASSO fails to account for the panel structure of the data, which consists of observations on the same companies tracked over time. Panel data inherently contains unobserved, time-invariant heterogeneity among individual water companies—persistent characteristics specific to each firm that influence their cost structures but are not directly measured by the available cost drivers. When these company-specific effects are ignored, they become absorbed into the error term rather than being explicitly modelled, effectively acting as omitted variables that can bias the estimated relationships between costs and the included explanatory variables. This leads to inconsistent coefficient estimates, as the model fails to distinguish between the true impact of measurable cost drivers and the influence of unmeasured company-specific factors such as geographic constraints, legacy infrastructure characteristics, or operational practices that persist over time.

(173) This represents a significant departure from established regulatory practice in the water sector. Both Ofwat and the CMA have consistently emphasised the importance of accounting for unobserved heterogeneity when benchmarking firm performance, with the CMA explicitly concluding in its PR19 redetermination that "*a random effects model is the most appropriate estimation technique*" for capturing systematic differences across companies. Unlike standard LASSO (which treats all observations as independent), random effects specifications explicitly model the distribution of unobserved company-specific factors, improving the reliability of both coefficient estimates and efficiency assessments.

(174) The importance of this panel structure is empirically demonstrated by a test set out in Professor Kumbhakar's paper—when company dummy variables were added to the CMA's initial variable set and LASSO was rerun, most

company dummies were retained in the final model, with the water resources plus model collapsing to a scale driver and energy index alongside 14 company-specific dummies. This result invalidates the CMA's implicit assumption about the absence of meaningful unobserved heterogeneity. The risk introduced by the CMA's choice of estimator is that, by ignoring the panel structure of the data, LASSO could select the wrong variables, producing results that are biased and inconsistent.

5.6 Failure to account for company-correlation in estimating statistical significance

(175) The CMA's assessment of statistical significance in its post-LASSO OLS models relies on unadjusted standard errors, which fail to account for the inherent structure of panel data whereby observations for the same company across different time periods are not independent. When data consists of multiple companies observed over time, the residuals for each company are related or correlated across periods, meaning that cost deviations from the model's predictions tend to persist or exhibit patterns within each firm over time. Ignoring this correlation leads to standard errors that are artificially small, making variables appear statistically significant when they may not be. The appropriate approach, which Ofwat consistently employs in its modelling framework, is to use clustered standard errors that explicitly account for within-company correlation. This adjustment provides a more accurate assessment of whether the estimated relationships between costs and explanatory variables are genuinely statistically distinguishable from zero or merely artifacts of the particular dataset used.

(176) When the CMA's models are re-estimated using clustered standard errors—the econometrically appropriate method for panel data—many of the variables that LASSO selected become statistically insignificant, including some of the multiple density variables considered simultaneously in the models, as well as the energy and wage indices. This finding is particularly concerning given the CMA's emphasis on statistical performance and model fit as criteria for variable selection through LASSO. If variables chosen specifically for their contribution to explanatory power

cannot demonstrate statistical significance when the appropriate inference method is applied, the CMA's approach lacks the necessary checks and balances—in the form of cross-checks with operational, engineering and economic rationale—to ensure that it is capturing a valid relationship between cost and cost driver.

- (177) The loss of significance for input price indices is especially problematic given the issues around their inclusion summarised in section 4 above.
- (178) To illustrate the magnitude of this effect, in Tables 4 and 5 below, we show how the reported statistical significance of variables in the CMA's WRP and WWNP PD models (leftmost column) changes when using clustered standard errors (middle column) and relative to one of Ofwat's FD models in the same area. Variables that do not pass tests of significance at the 10% level are marked in red, while variables that pass tests of statistical significance at the 10%, 5% and 1% level are marked in yellow, light green and dark green respectively. A grey cell indicates where the variables does not feature in the model, and the intercept is marked in white regardless of its significance.

Table 4 Statistical significance of variables in the WRP models

	CMA PD (unadjusted standard errors)	CMA PD (clustered standard errors)	Ofwat FD WRP1 (clustered standard errors)
Intercept	**		***
Connected properties (log)	***	***	***
Water treated at complexity levels 3 to 6 (%)	***	**	***
LAD from MSOA - Weighted Average density (log)	***	**	***
LAD from MSOA - Squared weighted Average density (log)			***
MSOA - Squared weighted average density (log)	***	***	
Properties per length - Weighted average density (log)	NS	NS	
Properties per length - Squared weighted average density (log)	*	NS	
Average volume per WTW (log)	NS	NS	
Energy index interacted with the length of mains (log *log)	NS	NS	

Source: Oxera analysis. *** indicates significance at the 1% level, ** at 5% level, * at 10% level. NS indicates that the variable does not pass a statistical significance test at the 10% level. Ofwat (2024), 'PR24 final determinations: Expenditure allowances - Base cost modelling decision appendix', December, p. 64 and p. 75. CMA (2025) 'WATER PR24 REFERENCES Provisional Determinations Volume 5: Appendices A–F and Glossary', pp. 24 – 25. Kumbhakar, S. (2025) 'A review of the Competition and Market Authority's use of LASSO in the PR24 redeterminations', November, pp.20 – 21.

Table 5 Statistical significance of variables in the WWNP models

	CMA PD (unadjusted standard errors)	CMA PD (clustered standard errors)	Ofwat FD WWNP1 (clustered standard errors)
Intercept	***	**	***
Load (log)	***	***	***
Properties per sewer length (log)	**	NS	
Pumping capacity per sewer length (log)	NS	NS	***
Load treated with ammonia consent < 3mg/l	***	***	***
LAD from MSOA - weighted average density (log)	**	NS	
MSOA - weighted average density (log)	*	NS	
Weighted average treatment size (log)	***	*	
Load treated in size bands 1 to 3 (%)	NS	NS	**
Urban rainfall per sewer length (log)	***	*	***
Energy index interacted with pumping capacity (log * log)	***	*	

Source: Oxera analysis. *** indicates significance at the 1% level, ** at 5% level, * at 10% level. NS indicates that the variable does not pass a statistical significance test at the 10% level. Ofwat (2024), 'PR24 final determinations: Expenditure allowances - Base cost modelling decision appendix', December, p. 64 and p. 75. CMA (2025) 'WATER PR24 REFERENCES Provisional Determinations Volume 5: Appendices A–F and Glossary', pp. 24 – 25. Kumbhakar, S. (2025) 'A review of the Competition and Market Authority's use of LASSO in the PR24 redeterminations', November, pp.20 – 21.

(179) It can be seen that a majority of the variables added by the PD LASSO process above Ofwat's more parsimonious specification, fail tests of statistical significance—i.e. the data suggests that the 'effect' they are capturing cannot be distinguished from 0. As shown in Professor Kumbhakar's report, many of the variables that fail statistical significance tests have a p value greater than 0.2.

6 CMA's approach is procedurally flawed

6.1 Lack of sufficient consultation

(180) The errors set out above are compounded by the lack of sufficient and early consultation. The PD framework was not proposed by any stakeholder as part of the redetermination process. Indeed as Ofwat noted in its response to the CMA's Approach and Prioritisation document: "[...] LASSO was not suggested by any company during the PR24 process, and we did not receive substantial comments on our model selection approach in responses to either our 2023 base cost modelling consultation or the PR24 draft determinations."³⁴ Nor has it been applied to any regulatory cost assessment context in the UK to Anglian's knowledge. Despite the novelty

³⁴ Ofwat, Response to the CMA's Approach and Prioritisation document (June 2025), page 7 (para 1.19).

of (and limited³⁵ support for) the approach provisionally applied by the CMA, the models that achieve these significant outcomes for Disputing Companies have not been through adequate consultation.

(181) The CMA has also failed to apply the standards it established at PR14, where it criticised Ofwat for using complex models without presenting results in an understandable way that would enable proper stakeholder engagement.³⁶

(182) Material concerns were raised by multiple parties from the moment LASSO was first mooted in the A&P document. The CMA continues against this backdrop but failed to take opportunities to effectively consult including at the hearings to seek proper feedback on its envisaged scope and approach beyond high level discussions. Nor did the CMA use the opportunity to use a Working Paper process to consult before making such a large set of changes (an approach used in PR19).³⁷ The result is that very little air-time has been given to the consideration of LASSO, and then only at a theoretical level, resulting in insufficiently trailed models relative to the scale of change now implemented. Companies have not been given sufficient time to respond to such fundamental changes and even within this limited time, have identified a myriad of material errors in the models, revealing that the models do not make sense.

³⁵ Contrary to the CMA's claim, no stakeholder expressed support for the application of a LASSO approach in the context of the redetermination, in response to the CMA's Approach and Prioritisation document.

³⁶ In its Final Report at PR14 (See [here](#)), the CMA stated: "[...] we found Ofwat's models to be complex. We decided that we should not treat the complexity of Ofwat's models as a problem in itself. It is good practice to guard against unnecessary complexity in price control reviews, but there will be circumstances in which relatively complex models and methods are appropriate. However, we considered that Ofwat's approach was deficient in the following way. Having decided to use complex models that it had recognised were difficult to interpret, Ofwat did not then undertake a further step to present the results and implications of its models in a more understandable and intuitive way. Doing so seems important for two reasons:

a) It might reveal aspects of the models that do not make sense (or at least require further investigation or explanation) which would otherwise be obscured by the complexity of the models.

b) It would make it easier for water companies and other stakeholders to understand the models and to see the extent to which the estimated expenditure for a particular company reflects adjustments for various explanatory factors and cost drivers. This is important in a context where econometric models are to be used as a starting point for cost assessment, and therefore have a major bearing on the determinations of wholesale price controls"

³⁷ Competition and Markets Authority, Water Redeterminations 2020 2019/20 data for base cost models Working Paper (13 January 2021) (See [here](#)).

(183) While the same timelines are not possible in an appeal, there are standards of consultation and care that must be met. Companies have not been given sufficient time to respond for the first time at the PD to such fundamental changes.

6.2 The PD's approach to LASSO is partial and biased towards specific grounds of appeal, and has failed to make appropriate enquiries

(184) The CMA's LASSO methodology is selective, partial and flawed, resulting in bias. The CMA decided to assess only the eight issues raised by Southern and South East Water (PDs, ¶ 4.36-4.38),³⁸ ignoring the broader variable set developed through three years of industry consultation for PR24.

(185) This partial approach is unjustified. As LASSO effectively replaces Ofwat's base modelling, it should – at a minimum – have transparently considered the longlist of variables advanced at PR24 (all of which were deemed to have engineering rationale, and which were excluded only by Ofwat's modelling choices – from which the CMA have now materially diverged). The result is a bias towards specific Disputing Companies whose variables are the only ones taken forward and whose CACs are the only ones the CMA employs LASSO to assess.

(186) In contrast, there is no evidence of the CMA considering whether the result is the correct outcome for Anglian, or indeed any transparent assessment of whether variables Anglian raised to the CMA's attention during PR24 (namely total APH, APH WRP and booster pumping station capacity) should be included.

(187) The failure of the PD to assess wider variables means it has failed to have regard to relevant facts and failed to make appropriate enquiries to identify the inputs needed for its new modelling framework. That the CMA has less time than Ofwat is no response.

³⁸ Competition and Markets Authority, Water PR24 References Provisional Determinations Volume 1: Introduction, Background, Approach and prioritisation, Base costs – Chapters 1–4 (9 October 2025), page 47 (paras. 4.36-4.38) (see here).

- (188) The CMA's Guidance is clear that a redetermination may not necessarily lead to a better outcome for the Disputing Companies than the Ofwat FD. However, it is also explicit that the CMA "*has a duty to make determinations for each such reference*" and must decide the matters before it "*on its own merits*".³⁹ It therefore cannot reduce one party's allowances as a result of a selective methodology to address a specific aspect of another party's case, without properly considering and reaching a decision that this is the correct outcome for Anglian's redetermination on its merits and is compatible with the CMA's duties.
- (189) Stepping back, three companies sought base modelling changes from the CMA (Southern, South East Water and Wessex Water). The PDs find these are three of only five companies that Ofwat has underfunded on base. This outcome warrants strong scrutiny given the selectivity of the methodology employed.

6.3 The CMA's methodology creates poor regulatory outcomes and incentives:

- (190) The CMA's approach sets a reference point for future price controls, making long-term assessment essential. Ofwat's PR24 modelling builds closely on CMA's PR14 and PR19 redeterminations—the base cost consultation references the CMA 42 times, stating Ofwat will "*build on our PR19 approach, which was largely supported by the Competition and Markets Authority*".⁴⁰ Whilst the CMA defers to government on IWC recommendations regarding the future supervisory role of the industry, inserting new models without considering longer-term robustness would be irresponsible regulation.
- (191) Similarly, the CMA's approach also has implications for the special merger regime applicable to water mergers, where it could materially complicate the regulator's assessment of the merger on its ability to make comparisons between companies

³⁹ Competition and Markets Authority, Water References: Competition and Markets Authority Guide (10 December 2024), pages 8 and 12 (paras. 2.2 and 3.9) (See [here](#)).

⁴⁰ Ofwat, Assessing base costs at PR24 (December 2021), page 1 (See [here](#)).

- (192) The PD framework increases operational and planning uncertainties. With no clear starting framework for assessing efficiency (particularly given its contradictions with previous redeterminations) LASSO's dependence and dataset sensitivity creates volatility between and even within price controls as data updates. It creates perverse incentives towards mechanistic processes that minimise efficiency score *spreads* regardless of actual efficiency scores, incentivising companies to maximise LASSO variables rather than focus on engineering-identified cost drivers. Base cost modelling however, should explain genuine efficiency differences based on engineering-identified cost drivers, which may produce wide(r) efficiency score ranges.
- (193) The approach doesn't align with IWC recommendations—it's neither simpler nor operationally grounded, exemplifying concerns about econometric overreliance without operational context. Credit agencies cite regulatory uncertainty for downgrades; LASSO compounds this when stability and predictability are paramount for investability.
- (194) Likewise, steps do not appear to have been taken to calibrate the risk and return framework as a result of the significant reductions in base allowances. The impact on operational and financial performance is expected to be significant. It does not appear that the CMA has cross-checked what impacts this would have on firms' resilience, and therefore how the resources available to firms are sufficient to meet customers' expectations and statutory duties.

6.4 The CMA's approach is not consistent with the principles of good regulation

- (195) The failure to reach good regulatory outcomes stems from the CMA's departure from good regulatory principles.
- (196) The CMA should act consistently, and Anglian has legitimate expectations that it will do so. At PR19, Anglian challenged Ofwat's models (which are broadly similar to those at PR24), but the CMA accepted and retained them. Anglian therefore aligned fully with Ofwat's econometric benchmarking models at PR24 and submitted its Business Plan accordingly. The CMA has now reversed course, producing entirely new

models using an unprecedented technique, then inconsistently treating companies by only adopting variables from two companies. This selective, disjointed process falls far short of consistency standards.

- (197) The outcomes produce significant adverse side-effects for asset health through disproportionate base funding reductions. The CMA must target issues proportionately and intervene only where necessary. Replacing the status quo with unrobust models that create such side-effects is disproportionate and untargeted regulation, particularly where rewriting models was unnecessary to address the claims before it.
- (198) It is also noted that the CMA's approach to base modelling is inconsistent with the predictability, process and proportionality limbs of its own newly developed "4Ps", which the CMA's Annual Report has stated it intends to roll-out across all of its functions.⁴¹

7 Conclusion and proposed way forward given the time available

- (199) In short, the PD's base cost models are fundamentally flawed and unfit for purpose.
- (i) They produce perverse outcomes that contradict operational reality (eg. in their forecasts for energy prices, and their failure to sensibly correlate energy use allowances for company size).
 - (ii) They produce significant inconsistencies in the CMA's findings within: (i) the same modelling suite (eg. density correlates with higher vs. lower costs in different models); (ii) within the broader PDs (eg. the models identify a different relationship with WTW costs vs. evidence relied upon to assess South East's CAC); and (iii) with the economic relationships accepted by the CMA in PR19 (eg. applying an entirely different cost vs. density relationship vs. PR19).

⁴¹ Ofwat, Assessing base costs at PR24 (December 2021), page 1 (See [here](#)). CMA Annual Report and Accounts 2024 to 2025: "That's what our '4Ps' framework is designed for. Pace, predictability, proportionality and process: common sense principles that can make a real difference to how we operate. We're now rolling out tangible actions under these 4Ps across all our functions" (See [here](#))

- (iii) They deploy statistically insignificant variables that have very significant impacts on allowances thereby failing evidence standards the PD holds Disputing Companies to elsewhere in the PDs.
- (iv) They are biased, only including candidate variables from Southern and South East Water, rather than variables put forward by other companies in the PR24 process (including Anglian's discussion of APH and booster pumping variables that have clear economic and engineering rationale for inclusion in any robust cost assessment framework (and would result in an £83m increase on Anglian's allowances)).
- (v) Rather than being robust, the models are highly unstable, being highly sensitive to additional inputs.
- (vi) They produce results (being a finding that Ofwat has systematically overfunded the industry on base cost allowances) that are contrary to evidence of the industry's chronic base costs underfunding, including Ofwat's recent Water Company Performance Report, which notes that actual spend was 17% higher than allowance set at PR19 FD over the 2020-2025 period.⁴² The CMA does not justify its position based on the evidence before it, nor does it acknowledge why it considers this to be the case.

(200) The cumulative effect of these errors – spanning methodological failures, incorrect treatment of key cost drivers such as density and energy, and the exclusion of relevant explanatory variables—creates systematic bias that fundamentally undermines the reliability of the cost predictions. The models fail to achieve their fundamental objective: to predict efficient costs for the five disputing companies, and have done so via a process that fails to meet the procedural standards of consultation that such a material change must incur.

⁴² Ofwat's WCPR, page 39 (See [here](#)).

- (201) The scale of issues is not possible to resolve in the time available. Accordingly, the models should not form the basis for setting cost allowances for Anglian at PR24.
- (202) Anglian recognises that the A&P Document originally stated that *“Depending on the robustness of the results and the extent to which they differ from Ofwat’s, we may use the results to inform our assessment of the claims submitted by the Disputing Companies and our decisions on whether to revise allowances”*. As above, Anglian considers the robustness threshold has not been met and that the structural selectivity of the methodology applied means the models are not suitable for determining industry modelled allowances. It may, however, be that subject to amendments to reflect companies’ submissions, the PD model could provide some partial insights into the claims of those parties whose variables have been incorporated (Southern and South East Water), and that the PD models could therefore have a partial role in informing CACs for their cases, subject to robustness tests. As above, they are not however, suitable for Anglian and wider allowances.
- (203) Anglian therefore requests that the CMA reinstate the Ofwat FD models to set Anglian’s modelled base costs and reconsider its analysis of Anglian’s CAC claims.

Chapter B.2

Base Costs – CACs, Frontier Shift, Retail

Anglian welcomes the CMA's provisional decision to reduce the Frontier Shift, and its recognition that retrospective under-delivery penalties for PR24 CACs are inappropriate. Beyond this, however, the CMA's rejection of Anglian's specific cost adjustment claims will, if retained in the Final Determination, significantly underfund its base costs with direct consequences for longer term services to customers and the environment.

In assessing Anglian's Boundary Box CAC, the CMA has failed to assess need. It concludes that unless Anglian can demonstrate 100% efficiency, no CAC funding can be granted at all (contrary to: (i) logic; (ii) the Ofwat CAC framework the PDs purport to apply; and (iii) the PD's treatment of enhancement claims). Anglian requests the CMA correct this error by assessing its Need case, revisiting Efficiency, and granting its CAC.

In assessing Anglian's Leakage CAC, the PD incorrectly concludes that Anglian's leakage position is not different to others and does not address the key question of whether Anglian is funded for frontier activities or explain the inconsistency between the CMA's position that PD allowances fund only average performance while denying the need for additional funding at the frontier.

The CMA wrongly dismisses Oxera's analysis showing significant underfunding of Anglian's Implicit Allowance, including on the basis of an erroneous claim that the statistical significance of some of the variables are not significant. All variables included in Oxera's models to assess the cost efficiency of the claim are statistically significant at the 10% level or greater—unlike the PD base cost models which include a number of statistically insignificant variables.

Anglian asks the CMA to revisit this CAC, which seeks funds (consistent with PR19) for Anglian's critical frontier leakage efforts in its climate vulnerable region.

In relation to the industry-wide mains renewal CAC, the CMA retains Ofwat's decision that "base buys" a 0.3% renewal rate (instead of the 0.2% Anglian requested). Anglian asks the CMA to revisit this, as its calculation: (i) disproportionately weights the smallest company in the industry's renewals rate;

and (ii) uses the wrong period (13 years) to set costs, even though benchmark allowances in the base models are determined by the last 5 years spend. The effect of the latter is essentially to retrospectively punish companies for not achieving a 0.3% rate (which was not specified to companies at the time of AMP7) despite the CMA having rightly removed under-delivery claw-backs elsewhere in the PD.

The CMA rejects Anglian's **gravity storage and sewer points** claim, by finding no new evidence of conditions deteriorating since Anglian's 2023 ASRAP assessment. However, storage point deterioration severity and rate data, and new insights from monitors on gravity sewer faults have brought increased concerns for both assets, which – combined with the base-stretch imposed in Ofwat's FD – led Anglian to make this claim. Evidence on these assets has been requested by Ofwat in the Roadmap exercise. The CMA should either review the evidence and assess the CAC in full, or – if it chooses to deprioritise evidence outside the ASRAP or defer to the Roadmap – should be clear that it has done so to avoid a high-level review unjustly prejudicing the Roadmap's assessment.

Anglian welcomes the steps that the CMA has taken to correct Ofwat's approach to setting frontier shift, and requests that the CMA use the most up-to-date data when setting frontier shift in the Final Report. The **Frontier Shift** should also be applied to the Retail model to ensure consistency with the CMA's stated effect of aligning its approach with Ofwat's FD and of applying the Frontier Shift to all expenditure mostly outside management control.

The PD incorrectly assumes Anglian's request to update **Retail** models with corrected average bill forecasts requires onerous data collection and model reruns. The ask is only for simple updates to one existing variable using data the CMA already holds. Anglian requests that the CMA revisit this ask, update the Retail Models for Frontier Shift (as above) and for the FD inflation assumption to ensure FD consistency.

It must also be recalled that – stepping back – the effect of the PD is to make the funding available for Anglian's assets worse. Anglian asks (per Chapter B1) that for its own base cost allowances the CMA revert to Ofwat's models and then

carefully assesses and grants Anglian's base CAC asks, to support the interests of its customers and the environment.

(204) The remainder of this response is structured as follows: (i) Frontier Shift; (ii) Boundary Boxes; (iii) Leakage; (iv) Storage Points and Gravity Sewers; (v) Mains Renewal; (iv) Retail Allowances.

1 Frontier Shift

(205) The CMA has concluded from reviewing the available evidence that the factors causing the slowdown in UK productivity following the global financial crisis are economy-wide and these have also impacted the water industry (PDs, ¶4.159). Anglian strongly agrees with the CMA's view on this point.

(206) Following this, Anglian also agrees with the CMA (PDs, ¶4.160) that forecasts for productivity growth in the economy as a whole provide the best guide for forecasting productivity growth in water. Using the latest forecasts of the OBR and the Bank of England, the CMA has decided to apply a frontier shift of 0.7% per year.

(207) Anglian observes that imposing a 0.7% pa reduction in the cost allowances of the DCs continues to represent a significant challenge for the following reasons:

- (i) 0.7% pa is considerably in excess of what the UK economy has achieved in recent years and – by the CMA's own calculations (PDs, ¶4.158) – the achievements of the water sector.
- (ii) total factor productivity figures in the KLEMS database reflect improvements achieved by firms in both cost reduction and performance improvement. Imposing a 0.7% pa challenge to cost allowances implies either that productivity improvement from performance improvement is expected to be nil (which is highly

unlikely given the powerful incentives on water companies for performance improvement in AMP8) or an overall TFP challenge much greater than 0.7% pa and more distant from independent forecasts.

- (iii) regulators' past forecasts have proved to be overly optimistic. The CMA acknowledges the OBR's admission of this point in respect of its own forecasts PDs, ¶4.162), and Section 4.2 of Annex 020 to Anglian's PD Response (*"Oxera, PR24 Long term inflation assumption"*) further discusses the issues with the OBR's previous productivity forecasts, including evidence given by the OBR's leadership to MPs.

(208) Notwithstanding the above, Anglian welcomes the CMA's proposal to base its frontier shift estimate on the latest forecasts of the Bank of England and the OBR. The CMA does not share its reasoning as to how it reached 0.7% pa from these sources but Anglian observes that it represents an approximate average of the forecasts produced by the two bodies, if equal weight is applied to the pair. The Bank of England's track record of forecasting productivity has been superior to that of the OBR (see again Section 4.2 of Annex 020 above). It would seem appropriate therefore to place more weight on its forecasts than those of the OBR.

(209) The OBR will be making fresh forecasts for UK productivity in its Autumn bulletin to be published in November. In finalising the frontier shift estimate in its FD, the CMA should, therefore, update the March 2025 forecasts in the calculation it has made for PDs with these November forecasts. This would be in line with the CMA's reasoning that its PDs are based on current forecasts of productivity growth (PDs, ¶4.174).

(210) In its PDs, the CMA estimated the impact of reducing the frontier shift estimate from Ofwat's 1.0% pa to 0.7% pa at £52.7m. In response to Anglian's query, the CMA stated that, *"The figures shown in Table 4.6 of the PR24 PD are based on Ofwat's 'Base cost aggregator mode'".*⁴³ The

⁴³ Email from CMA to Linklaters dated 17 October 2025.

CMA changed the frontier shift assumption from 1% to 0.7% in the 'Controls' tab, and then calculated the resulting difference in total modelled base costs in the 'Modelled-Base' tab.' Anglian notes that while the change described above successfully applies frontier shift adjustments for water and wastewater wholesale costs, the comparable adjustment for retail costs is not made within that model⁴⁴. For those costs, Ofwat applied the frontier shift adjustments within the third retail model⁴⁵. In its calculations for the final determination, the CMA should ensure that its frontier shift estimate is also correctly applied to the retail cost allowance. This ensures consistency with the stated effect of the frontier uplift articulated at para 4.187 of the PDs, namely that the CMA intends "*to apply the frontier shift to **all expenditure allowances** except for costs that were mostly outside of company control and self-financing costs*" (retail rates do not fall into either of the excluded categories) and to take "*the same approach as Ofwat's PR24 FD*" (which applied the frontier shift to retail costs).

2 Company specific Cost Adjustment Claims (CACs) - Overview

(211) The PDs' logic and assumptions that underpin the assessment of Anglian's CACs is wrong on several points, which Anglian clarifies below:

- (i) The PD fails Anglian's Boundary Box CAC solely on 'efficiency' grounds without considering 'need'. This is (i) logically flawed; and (ii) inconsistent with both the PD's stated adoption of Ofwat's CAC framework (which awards partial funding for need despite concerns about the efficiency of the claimed costs) and with the CMA's treatment of enhancement claims. In dismissing Anglian's efficiency claim the CMA wrongly does not carry through its recognition of the limits of bundling into its benchmark assessment.
- (ii) Anglian's Leakage CAC is dismissed based on lack of need. The assessment focuses on the amount spent by companies rather than

⁴⁴ The change was made to both Wastewater Network Plus and to Bioresources, which (like Retail) the CMA had deprioritised.

⁴⁵ Ofwat, Cost assessment models Base costs – residential retail model 3 (See [here](#)).

engaging with Anglian's evidence of insufficient funding. Not recognising a need for increased funding for frontier performance is also inconsistent with the PDs' position that base allowances fund average requirements only.

(212) The result is that Anglian remains materially underfunded for essential costs that result from its need to take frontier action to protect its customers and assets in its water scarce and climate vulnerable region. Indeed, adding the value of Anglian's Boundary Box CAC together with its anticipated leakage overspend at AMP8 brings the expected aggregate shortfall for undertaking these two critical activities to £296.4m.⁴⁶

3 Boundary Boxes

3.1 The PD's approach to assessing Anglian's CACs fails to adopt its stated process and is inconsistent with its wider approaches to assessing companies' other expenditure requests

(213) The PD claims it "*adopts the same framework as Ofwat*" for CACs (PDs, ¶4.286). That is not the case.

(214) Ofwat's PR24 CAC framework applied the common-sense principle that even if some element of a claim was judged inefficient, the claim was not automatically rewarded £0.

(215) The framework requires two necessary criteria to be met: (i) need for adjustment (with four sub-criteria: unique circumstances; factors outside management control; materiality; implicit allowances accounted for); and (ii) cost efficiency (with three sub-criteria: compelling efficiency evidence; clear cost basis; third-party assurance).⁴⁷

⁴⁶ This calculation is based on the value of Anglian's Boundary Box CAC claims and anticipated leakage overspend (as against the PR24 FD model).

⁴⁷ Ofwat, Creating tomorrow, together: Our final methodology for PR24 Appendix 9 Setting expenditure allowances (December 2022), page 29 (See [here](#)).

(216) At PR24 Ofwat considered that the “*need for adjustment criterion is ... the most important*”.⁴⁸ Both need and cost efficiency were assessed, but if a company could not demonstrate need, then the CAC was rejected.

(217) Neither of these key criteria was viewed as binary: in both cases Ofwat had a tripartite view of pass, partial pass and fail. Indeed Table 6 below shows examples of outcomes in Ofwat’s PR24 FDs. As this shows, funding was awarded at PR24 where need was demonstrated even if efficiency partially / fully failed.

Table 6 Examples of CAC assessment outcomes at PR24

Co	Price Control	CAC name	Need?	Cost Efficiency?	Allowance as % of company’s claim
BRL	Water Resources	Canal & River Trust	Pass	Partial	100%
HDD	Water Resources	Managing interventions	Partial	Partial	76%
HDD	Water N+	Reservoir maintenance	Pass	Partial	74%
SES	Water N+	Water Softening	Pass	Fail	78%
SEW	Water N+	Economies of scale at WTW	Pass	Partial	57%
SRN	Water N+	Economies of scale at WTW	Pass	Partial	80%
WSX	Water Resources	Nature Based Solutions	Partial	Fail	16%
WSX	Wastewater N+	Nature Based Solutions	Partial	Fail	76%

(218) The approach in the PD is internally inconsistent and contrary to common-sense:

- (i) The PDs state they adopt Ofwat’s framework and recognise that “*Ofwat will sometimes award a lower value*” where need passes but efficiency concerns exist. Yet for Anglian’s Boundary Box claim, they state that “*as our provisional assessment shows that the claim fails*

⁴⁸ Ofwat, Creating tomorrow, together: Our final methodology for PR24 Appendix 9 Setting expenditure allowances (December 2022), page 30 (See [here](#)).

the efficiency criterion, we have not assessed the need criterion" (PDs, ¶4.286 and 4.534) - a direct contradiction.

- (ii) There is no good reason for departing from the stated framework. Boundary box failures can bring material customer harm (due to potentially inhibiting customer access to a working stop-tap or causing leakage in their properties, as well as contributing to water-waste) and are therefore (per Anglian's SoC) rarely ignorable (ANH SoC ¶282).
- (iii) This approach to base claims is also inconsistent with the approach to enhancement – where the PDs allow DC enhancement claims despite identifying perceived inefficiencies. Indeed, for Southern Water, the PDs states that: *"We have not seen evidence that questions the need for funding, so our assessment only focuses on the efficiency of Southern's claimed costs. ..."*. (PDs, ¶5.362). The PDs then subsequently conclude: *"Due to the significant concerns that we have with the cost efficiency of Southern's request for containment costs, and consistent with Ofwat's methodology for deep dive assessments, we have provisionally decided to apply a 30% challenge."* (PDs, ¶5.371)
- (iv) There is no rationale for treating base less favourably to enhancement. Per Anglian's SoC, given the volume of uncontrollable and non-discretionary costs, squeezing base costs has a disproportionately large impact on capital maintenance spend (ANH SoC, ¶200) and for cost categories relating to asset health the PDs recognise that there is a *"pressing need for further progress"* (PDs, ¶4.194).

(219) In light of the above, it would be wrong, and inconsistent with the CMA's duties, to fail to assess need at FD.

3.2 Boundary Box (BB) CAC: There is a clear Need for Anglian's CAC

(220) Anglian's need-case has been clearly set-out (ANH SoC ¶269-279). To assist the CMA, this is summarised below:

- (i) **Unique circumstances:** The East of England is extremely dry. This was the principal driver of Anglian being the frontier metering adopter, reaching 42% penetration by 2000 – double that of the next company and triple the industry average. Boundary boxes have 25-30 years life. The c. 500,000 AMP2 installations (1995-2000) forms the cohort of expected Boundary Box potential failures during AMP8. As explained, Anglian commissioned AECOM to undertake analysis of Boundary Box job data to inform its understanding of the acceleration in failures.⁴⁹
- (ii) **Outside management control:** Boundary Box repair needs are a result of meter installation and are rarely ignorable due to their potential harm to customers and water-scarcity. These are now, of course, widespread, with Anglian's need flowing from it taking frontier action thirty years ago (supported by Ofwat) to roll-out important assets to address its key regional scarcity risk.
- (iii) **Material:** Anglian's CAC value (£138m) is 5.3% of PDs base allowances and 16.7% of base capex allowances – creating a further material pressure on capital maintenance. For Anglian, this cost pressure is increasing rapidly given Anglian is at least one AMP ahead of the industry due to its frontier action, meaning costs are only represented in the existing historical data used for cost modelling to a very marginal extent.
- (iv) **Implicit allowances accounted for:** The Implicit Allowance, per Anglian's SoC, is only 1.1% of gross CAC value (ANH SoC, ¶278-280) and Anglian's leakage CAC is based on the assumption that the Boundary Box CAC is funded.⁵⁰

(221) All Need criteria are therefore clearly met. To assist, Anglian explains why Ofwat's dismissal of the needs case is wrong in Annex 005.

⁴⁹ Anglian's response to Anglian RFI 3, Question 3, page 3.

⁵⁰ Anglian's Post Hearing Submission, page 3.

(222) Recognising the need for this spend is consistent with the broader PR24 framework. Ofwat acknowledges that ongoing base spend can arise from historical enhancement investment. For example, PR24 included cost adjustments for all wastewater companies to cover new base spend from AMP7 P-removal investments. These PR19 funded investments, largely completed towards the end of AMP7, generated ongoing operational costs (eg. for power and chemicals) that barely featured in the historical data underpinning Ofwat's base models, necessitating out of model adjustments. The similarity to new base costs from boundary boxes funded as enhancement thirty years ago is evident -differing only in time-lag and the number of companies affected. Funding Anglian's claim is consistent with this common-sense regulatory approach.

3.3 Boundary Box CAC: Anglian's claim is efficient

(223) The PD analysis applies unrepresentative efficiency benchmarks. The confusion arises because boundary boxes are replaced in distinct scenarios. The first scenario is where Anglian discovers the defective boundary boxes while swapping visual read meters for smart meters. The second scenario is where defective boxes are discovered anywhere in Anglian's supply area (by Anglian or a customer) independent of the smart metering programme.

(224) This is relevant for efficiency, as boxes in the first scenario can be replaced much more cheaply. Under the smart meter programme Anglian visits every metered property within a defined location (e.g. a village) in a short space of time. Every defective boundary box it discovers as part of that process can be packaged into grouped repair jobs once the smart metering installation completes, enabling efficient execution, with minimal travel time between jobs, savings on traffic management costs, etc.

(225) Defective boundary boxes discovered in the second scenario do not have these advantages. These repairs occur randomly in time and space. While Anglian takes every possible opportunity to 'bundle' jobs in close proximity into packages of work that can be completed as efficiently as possible, the opportunities to do this are naturally limited by Anglian's rural customer

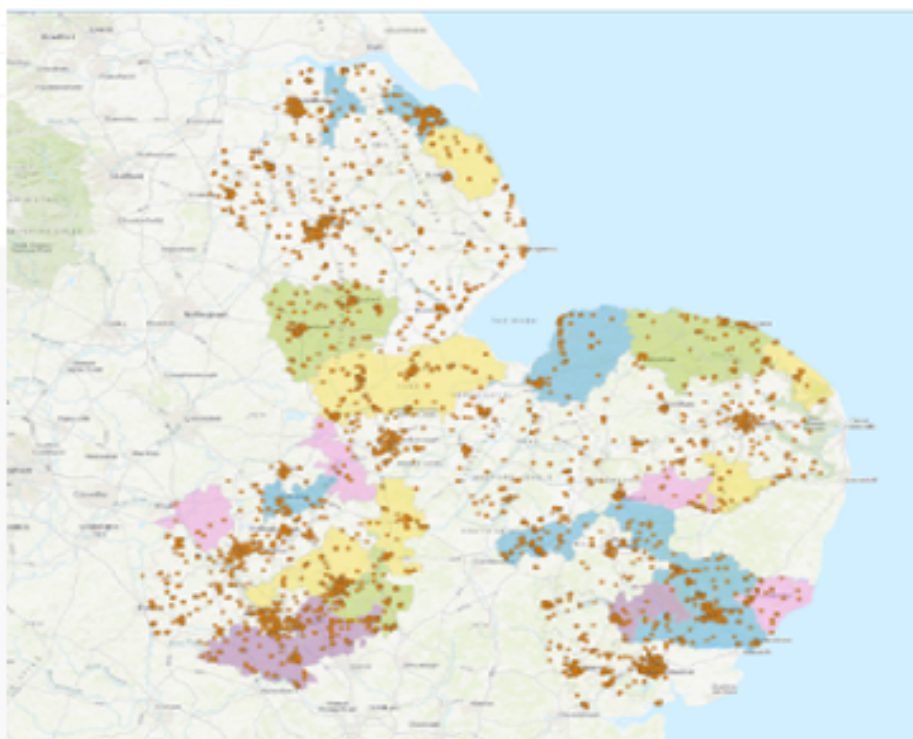
base and the limited time that defective boundary boxes can remain unrepaired.

- (226) Examples of the cost differential between jobs in scenarios one and two are that all works (whatever surface type) require Traffic Management Act (TMA) permits, which cost £250. Ten bundled jobs on the same street, therefore, yield a £25 TMA unit cost, whilst a standalone job yields £250.
- (227) The CMA questions Anglian's £641.58 unit cost against lower Table 4.17 figures.⁵¹ This does not compare like for like. Table 4.17 figures were derived from a PR24 query around meter installation costs, so reflect scenario one rather than scenario two. Anglian accepts allowances for scenario one replacements are part of its meter renewal cost adjustment and makes no additional claim for them. The CAC, in contrast, seeks funding to cover the much larger number of scenario two 'ad-hoc' replacement jobs.⁵² While Anglian packages these jobs in the most efficient manner it can, there are limitations on its opportunities to obtain efficiencies from doing so.
- (228) While the PDs recognise that the opportunities for bundling are limited, they don't follow through on the consequence of this – ie. that treating Table 4.17 costs as a benchmark is an unrealistic assumption.
- (229) To illustrate this in practice, Figure 9 below shows the open stop tap replacements as at 30 October 2025 along with the phasing of Anglian's smart metering roll-out programme. Table 7 below shows the allocation of these open jobs to Anglian's smart meter programme areas.

⁵¹ It is noted that in Anglian's Supplementary Response to RFI3 it confirmed that its original stated figure of £649 was the correct unit cost value of its claim. However, Anglian proceeds on the basis of a claim value of £641.58.

⁵² Per Footnote 2 to Anglian's Response to Anglian RFI3, boundary box replacements that may be required during the course of Anglian's metering programme (being in 1.7% of its proposed meter upgrade population or 18,289 boundary box installations per para. 275 and Annex 009 of Anglian's SoC) are not part of the forecast c. 239,000 replacements in Anglian's CAC.

Figure 9: Illustration of open stop-tap job spread vs. smart-metered areas in October 2025



Notes: Figure shows smart-metering programme completed in AMP7 and 24/25 in white. Planned smart-metering roll-outs are shown in colours (Blue shows 25/26; Purple 26/27; Green 27/28; Yellow 28/29; Pink 29/30). Open stop-tab jobs in October 2025 are laid on top in brown by way of illustration (produced via mapping tool, with three brown dots removed due to clear mapping error).

Table 7 Outstanding repairs vs. completion-rate of smart-metering programme

Year of smart metering roll-out	No. of outstanding boundary box repairs at 30 October 2025 in different roll-out areas	% of outstanding boundary box repairs at 30 October 2025
2020/21 – 2024/25	2,269	55%
2025/26	698	17%
2026/27	281	7%
2027/28	462	11%
2028/29	336	8%

2029/30	72	2%
TOTAL	4,118	100%

- (i) Under the smart metering programme, 60% of Anglian's metered customers are located in the zones that have already been completed. Table 7 shows replacing boundary boxes in synergy with the smart metering programme will not be possible for more than half of current jobs.
- (ii) Boundary boxes that can be replaced as part of smart meter upgrades (scenario one) are replaced in that programme. As explained above, funds for these replacements are not part of Anglian's CAC.
- (iii) Table 7 shows that 45% of the open jobs are within zones still to be smart metered. Even here, the opportunity to combine the works is limited. The areas remaining to be smart metered are predominantly rural. Most major towns and cities (except Ipswich, currently being smart metered) are complete, limiting clustering opportunities.
- (iv) Furthermore, Anglian's smart-meter programme runs for four more years; it will not commence in some zones for some years. Jobs cannot wait years to be bundled into efficient packages of work. Where possible Anglian will defer repairing a defective boundary box that it discovers but its experience is that in about a third of such cases, the householder himself contacts Anglian within three months to request a repair. Leaking boxes must be fixed and broken stop taps must be replaced to prevent internal flooding; acting otherwise would be irresponsible both for the welfare of Anglian's customers and their property, and towards the scarce water resources of Anglian's region. Only jobs in areas scheduled for upgrades within months can therefore potentially be added to those discovered within the smart metering programme and therefore benefit from the available efficiencies.

- (v) Looking at possibilities for bundling jobs outside the smart meter programme areas, Figure 9 shows some clusters around towns and cities such as Milton Keynes, Northampton and Lincoln. Anglian does geographically bundle jobs in areas such as this (Anglian bundled 43% of such jobs outside its smart-metering work in all its geographic areas during AMP7). However, many jobs are scattered across wider areas, where it would not be feasible to wait for other nearby jobs to crop-up close by to give bundling opportunities (given that boundary box faults harm customers and are rarely ignorable as above) and bundling the existing jobs would yield limited financial benefits given the dispersed nature of the bundle.
- (230) It would therefore be wrong to judge efficiency solely against a (bundled) benchmark that (as shown above) was derived from a very different scenario to the one covered by Anglian's CAC and does not reflect the on-the-ground reality in Anglian's region.
- (231) Anglian has explained that limitations on its ability to geographically bundle jobs flow from it being the frontier company for metering in the 1990s, as a means to address water scarcity challenges in its region. Whilst Anglian initially planned compulsory meter roll-outs in targeted locations such as those later used by other companies (which better facilitate bundling by increasing the likelihood of boxes in the same area failing simultaneously), customer pushback led to an opt-in strategy until 2007 – an approach praised by the Consumer Council for Water as explained.⁵³ This customer-led frontier approach inevitably created divergent boundary box conditions within streets, which Anglian should not be penalised for now. Proactively replacing all the boundary boxes within targeted locations would therefore be hugely inefficient and would entail the replacement of many assets that were far from life-expired.
- (232) Anglian's £641.58 is therefore efficient in the context of the jobs covered by its CAC as:

⁵³ Transcript of Anglian's Hearing, Page 32 and 33.

- (i) Anglian selected the lowest cost permutation available from the average outturn costs from its two partners across a range of time periods when submitting its unit cost in its boundary box CAC, which included taking into account geographical bundling opportunities.⁵⁴ This was materially below the average cost incurred for boundary box replacements in the scenario covered by the CAC, as illustrated by Anglian's supplementary response to RFI3. In doing so, Anglian set itself a substantial efficiency challenge.
- (ii) This remains the case when specifically measured against the average cost that Anglian incurred in the last two years of AMP7 to replace boundary boxes outside those discovered in its smart metering programme is £716⁵⁵ (22/23 prices), which is well in excess of the unit cost figure that Anglian used to quantify its CAC.
- (iii) Further, per Anglian's SoC, and supported by its CAC submission. Anglian's CAC excluded costs that might be implicit in base; limited its claim to replacement rather than repairs; benchmarked boundary box costs between suppliers; and identified potential economies of scale via bulk purchasing (ANH SOC, ¶280-281).
- (iv) The engineering consultancy Aecom has provided Anglian as part of its PD response with benchmark costs for replacing Boundary Boxes (provided in Annex 004). This analysed data from a comparable water sector company and Aecom's bottom-up benchmark assessment across the three surface types set out in Anglian's CAC, and assuming prices as at a 2025 cost base. Their analysis concludes that Anglian's costs are within the anticipated range, at the upper-end for works in footpath and carriage ways (finding an average of £808) and at the lower end for works in unmade/grass ground (finding an average of £600). This supports

⁵⁴ See Supplementary Response to Anglian RFI 3. For clarity the relevant permutation captured cost of boundary box installations as part of metering installations. This figure included Anglian's on-costs.

⁵⁵ This excludes Anglian's on-costs.

Anglian's contention that its proposed unit cost in its CAC represents an efficient rate.

- (v) Anglian adjusted the Aecom figures to the 22/23 price base of its CAC unit cost and calculated weighted average high and low benchmark figures on the basis of the surface type shares it reported in its CAC (see Annex 004a). This returned a weighted average cost range of £643 (low) to £716 (high) and a mean of £680. The CAC £651.48 unit cost therefore falls at the bottom of the range of expected costs provided by Aecom and well below the mean. Anglian's CAC unit cost is even more efficient than the benchmark given it included all costs whereas the benchmarks quoted by Aecom exclude a number of exceptional costs, such as compensation payments to third parties and the diversion of other services.

(233) Anglian therefore requests that the FD reassess this evidence and grant Anglian its CAC in full for its AMP8 Boundary Box replacement work.

3.4 Boundary Box CAC: Regardless of the CMA's conclusions, it is wrong to deny all funding based on efficiency

(234) The PD rules out all funding on efficiency grounds, implying the entirety of Anglian's costs are inefficient. Where any costs are efficient and need is demonstrated, these must be recognised consistently with the PDs' framework and enhancement approach.

(235) Even if the CMA considers Anglian's costs to be inefficient, the CMA has evidence that would support a partial cost adjustment fulfilling the efficiency criteria, given that Anglian has explained how it arrives at these costs, there is clear evidence that they are within the ballpark of averages Ofwat has already sought and supported by the data from Aecom.

(236) For example, even were the CMA to decide that only bundled costs are efficient, the CMA has a range of options available to it, including utilising:

- (i) the average of Anglian's unit costs shown in Table 4.17 (£518.25), would support granting Anglian a CAC of £107m.

- (ii) Ofwat's stated average unit costs of data collected in Table 4.17 (£443 – noting Anglian could not derive this average from Table 4.17), would support granting Anglian a CAC of £89m.
 - (iii) Southern Water's unit cost of £634, which would support granting a CAC of £134m.
- (237) While Table 4.17 options would use an unrepresentative benchmark and effectively punish companies that account for customer choice and preference in rolling-out important resilience initiatives (which is inconsistent with the CMA's consumer duty) it would nevertheless be more consistent with the duties than the current approach of dismissing all funding entirely without assessing need
- (238) There are therefore many ways for this point to be resolved. Recognising the uncertainty in the number of boundary boxes that will ultimately require replacement in AMP8, Anglian proposed in its SoC that to ensure customers are protected from any divergence from forecast replacement levels, the CAC be subject to a clawback mechanism (eg. some sort of uncertainty mechanism, such as a use-it-or-lose-it allowance or PCD) (ANH SoC ¶283). Anglian would be happy to support the CMA in arriving at an option it considers appropriate.

4 Leakage CAC

4.1 The PDs are wrong and inconsistent to fail Anglian on needs grounds

- (239) The PD provisionally concludes that Anglian has not provided evidence it has unique circumstances as *"maintaining a lower level of leakage may increases [s] costs all else being equal, however this ... effect, if it exists, is partially or totally offset by other effects working in the other direction"* (PDs, ¶4.576). This conclusion is wrong.
- (240) First, Anglian's need to maintain a frontier position must be considered in the context of its specific regional factors. Anglian's climate vulnerable region means controlling water-loss is a critical issue for Anglian and its customers. To secure its supply/demand balance, it has no choice but to

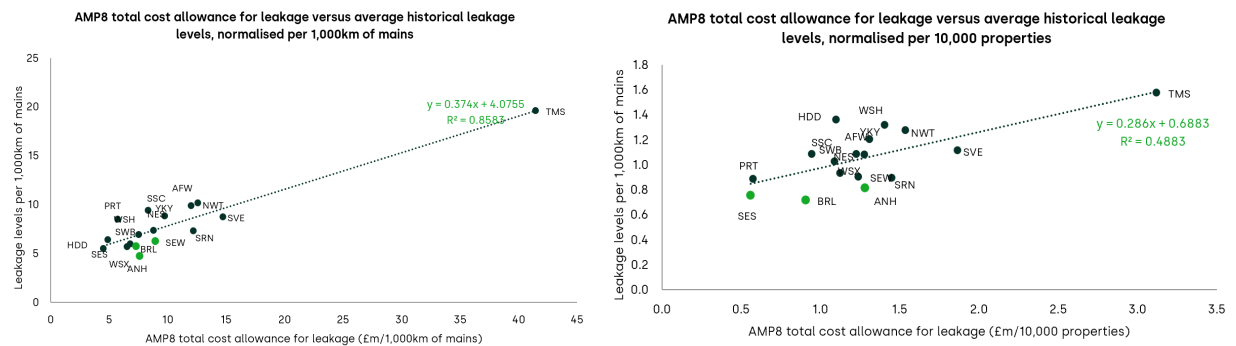
pursue frontier performance. It is inconsistent with the CMA's duties to underfund it to do so.

(241) Second, the PD evidence references only models and leakage spend, ignoring Anglian's evidence of the operational realities on the ground that clearly make frontier performance more costly (see ANH SoC, ¶243 concerning the need for more sophisticated technology, ongoing investments, smaller repair focus necessitating more site-visits and employees, and need to focus on non "easy win" locations). The PD likewise does not explain why the well-established economic principle of diminishing returns is deemed not to apply to leakage. This is inconsistent with the CMA's assessment (supported by the CMA's engineering advisor) at PR19 (PR19 FR, ¶8.52) and does not address evidence. Anglian requests that the CMA seeks (or transparently explains) their views on these points.

(242) Third, the PD cites the wrong evidence on costs / modelling, places undue emphasis on immaterial points, and appears to omit the most relevant. The PDs appear to rely on spend data for non-frontier companies and LASSO rankings to justify its position. This does not adequately address Ofwat's recognised "*key question*" (with which Anglian agrees): of "*whether the allowance from the base cost models provide **sufficient allowances** to allow leading leakage performing companies to maintain low leakage levels*". The evidence clearly shows that frontier companies are insufficiently funded:

- (i) **The PDs only fund average performance – creating fundamental inconsistency:** Anglian's submission show that: (i) Ofwat's models materially underfund Anglian's base allowances (see Oxera's analysis in Annex 007 to the SoC); and (ii) Ofwat's models fund companies more as leakage levels increase (see Figure 10 below which reproduces Figure A of Anglian's Reply to Ofwat's Response to its SoC – reproduced below).

Figure 10: Ofwat FD Leakage AMP 8 allowance vs. average historical issues



Oxera has re-assessed these two issues in light of the CMA provisional base cost models, and they persist materially, as the implicit allowance remains below Anglian's efficient cost requirement for maintaining its frontier leakage performance in AMP8.⁵⁶

The PD makes no attempt to analyse the Leakage implicit allowance under its models to assess if Anglian is sufficiently funded. However, the PD's position is that base allowances fund average performance.⁵⁷ This is inconsistent with the conclusion that no additional funding is needed for frontier leakage performance, whilst simultaneously requiring Anglian to perform at the frontier or face ODI penalties. If base allowances fund average performance, maintaining frontier performance must require additional base funding.

- (ii) **Oxera's evidence that Anglian is materially underfunded is incorrectly discounted.** The CMA conflates lack of unique circumstances with Oxera's analysis of the cost of maintaining frontier performance, which produced efficient AMP8 cost estimates

⁵⁶ See Oxera Datapack for Chapter B2 at Annex 006, file '9 Summary net CAC'.

⁵⁷ See, for example, para. 6.227 "If a company provides a level of performance above the industry average, it is likely to incur higher costs that are not directly covered by its base allowances, all else equal" and 6.169: "The regime for base costs effectively sets allowances reflecting the average level of performance in the sector. If a company seeks to exceed that level of performance, and if this generates additional costs, then these additional costs are not directly funded through base allowances" and (in the context of what base buys: "The conceptual benchmark we use is therefore what is a reasonable level of activity funded by base allowances for an efficient company facing 'average' conditions (where the average is taken over the different companies)". See also para 4.278: "Ofwat's base allowances ... are intended to provide an allowance based on long-term average requirements"

(net of IAs) of £65m-£160m, from which Anglian conservatively retained £67.6m.

- (a) Models 1 and 2 (Table 2.1 of Oxera's analysis) are the only models used to determine the CAC. All explanatory variables in models 1 and 2 are statistically significant at 5% or 10% levels. The CMA's criticism of "weak" statistical significance is unfounded. (It should also be noted, that their statistical significance is materially higher than the variables the CMA uses in its own LASSO analysis.)
- (b) The CMA's statement that some variables "are not significant" refers to illustrative models in Table 2.2, which are not used to determine the net CAC (see footnotes 19 and 24 of ANH SoC Annex 007).
- (c) Correcting the price base issue identified (PDs, ¶4.571) has no impact on modelling performance or statistical significance, and Anglian retains the conservative £67.6m figure.⁵⁸
- (d) Updating Oxera's analysis to i) reflect the implicit allowance from the CMA's provisional base cost models (which Anglian does not support for the reasons set out in Chapter B.1) ii) correct for the price base issue, and iii) update Anglian's 2024/25 forecast leakage performance with its actual performance results in efficient AMP8 cost estimates (net of IAs) of £78m-£162m, well above the level of Anglian's CAC.

⁵⁸ Oxera started from Ofwat's draft determination files for two reasons: (i) it was updating its DDR analysis with one additional year of data (2023/24); and (ii) the leakage levels reported in Ofwat FD files (column I) are evidently erroneous, undermining the reliability of this data. However, it is correct that Ofwat expressed leakage expenditure in a different price base compared to its DD files, so the 2023/24 data used in the modelling was not in the same price base as the other six years. Correcting for this has no impact on the modelling performance or the statistical significance of the estimated coefficients, which all continue to meet the 5% or 10% significance levels, as indicated in the above. Although the net CAC range varies slightly, this has no impact on Anglian's £67.6m CAC, as the lower bound remains above this value, confirming the efficiency and conservative nature of Anglian's claim.

- (iii) **Spend data is insufficient.** The CMA is wrong to focus on spend as it ignores efficiency (efficient companies have lower normalised costs at higher reduction levels than inefficient companies). Anglian has been found by Ofwat (and the CMA under the PD models, which as above, Anglian does not agree with) to be an efficient company on water overall.
 - (iv) **Actual overspend:** Even if spend data is considered, the PD does not consider whether Anglian has been funded for that spend. Anglian overspent its PR19 redetermination base leakage allowance by £39m and forecasts 51.6% overspend (£158.4m) in AMP8. As above, Anglian has been found by Ofwat and the CMA to be an efficient company.
- (243) Anglian therefore has clear unique circumstances owing to its frontier performance, the cost-impacts of that performance (evidenced by on-the-ground realities and cost/modelling evidence), and the existential regional realities within which its leakage activities must occur. The need criterion is clearly met.
- (244) Neither Ofwat nor the CMA have addressed the remaining three need sub-criteria. Anglian meets all three:
- (i) **Outside Management Control:** The CMA states that management *“has control over leakage levels as it can decide on investment in this area, although we recognise that these decisions are made in the context of exogenous factors”* (PDs, ¶4.571). While leakage is theoretically within management control, the consequences of Anglian not controlling leakage (for its customers, financially, reputationally, for the resilience of its assets, and the growth of its region) mean that management has no practical alternative but to seek to meet its leakage targets. Indeed, given Anglian’s climate vulnerable region, if Anglian did not seek to perform at the frontier, the practical impacts long-term would be that Anglian would likely need to stop supplying certain customers or would need to abstract water in excess of its licensed volumes. Anglian has already had to

turn down planning applications in its region due to insufficient water availability.

- (ii) **Are the costs material?** Yes - the costs are material.⁵⁹ The leakage reduction CAC is worth 1.9% of forecast totex and 2.6% of the wholesale Water PD assessment by the CMA.
- (iii) **Have Implicit Allowances (IAs) been taken into account?** Yes. Anglian's CAC showed the gross value of the CAC is £1,091.91m with an IA of £1,024.31m, giving a net CAC value of £67.6m.⁶⁰ Anglian has also explained that its CAC accounts for / is net of: (i) any benefits from reduced water use; (ii) leakage reductions achieved via the metering CAC; and (iii) leakage reductions if its Boundary Box CAC is fully funded.⁶¹ Considering the latest elements in light of the CMA PDs, Oxera finds Anglian's efficient AMP8 cost estimates (net of IAs) to range from £78m to £162m, thereby confirming the efficiency of the £67.6m CAC.

(245) For completeness, Anglian's SoC has also strongly disproven the reasons Ofwat provided for rejecting its original CAC on the basis of Need. Please see PD Annex 007.

4.2 Leakage CAC: Anglian's claim is cost efficient

(246) As above, it is wrong to dismiss Anglian's CAC⁶² based on need, and the CMA should therefore also consider the efficiency requirement.

(247) As set out in Anglian's SoC (ANH SoC, ¶249), Ofwat's finding that leakage was not statistically significant when included as a driver in Ofwat's base cost models does not mean there are no incremental costs to frontier leakage; that this is likely exacerbated by frontier leakage costs only being faced by a subset of companies that had been underfunded for leakage by

⁵⁹ Anglian, Boundary Box Cost Adjustment Claim (August 2024), page 2 (See [here](#)).

⁶⁰ Anglian, Boundary Box Cost Adjustment Claim (August 2024). page 2 (See [here](#)).

⁶¹ Anglian's post-Hearing Submission (25 July 2025), page. 3.

⁶² Anglian, Leakage Cost Adjustment Claim (August 2024) (See [here](#)).

the models; and it is inconsistent to set specific leakage targets (which both Ofwat and the PD set at the frontier for Anglian) without funding those costs purely because models are insufficiently granular to do so.

- (248) Both Ofwat and the PD base models (which Anglian does not support) find Anglian to be efficient on water overall, and as its SoC explains, Anglian is an industry leader, also helping to advise other water companies on leakage planning and actively participates in industry forums to ensure it continually applies industry-leading techniques (PDs, ¶234). Oxera's analysis – which is robust as shown above - estimates Anglian is significantly underfunded (net of IAs) by £65m-£160m,⁶³ with Anglian actively choosing to retain a conservative CAC of £68m, in line with its approach at FD of pursuing highly efficient and conservative claim, as explained in more detail in its SoC (ANH SoC, ¶237).

4.3 Storage points and gravity sewers

- (249) Anglian's Storage Point and Gravity Sewers claim is conditional and dependent on other decisions in the re-determination for capital maintenance allowances. As explained above, not only have all of those other requests been rejected, but base allowances have been further cut based on the results of the CMA's base models.
- (250) The CMA cites only the Asset Systems Resilience Appraisal ("**ASRAP**") in its analysis of the evidence for immediate critical asset health needs. It states that "*Anglian has submitted no new evidence to the CMA to suggest that the underlying asset risks have changed*" and that Anglian cited its ASRAP as showing the need for higher investment.
- (251) Anglian's SoC however explained that since its ASRAP (submitted in 2023) further information (particularly the continuing increase in the number of and severity of storage point defects – see Figure 24 of Anglian's SoC) has led it to identify the need for an additional £60m of funding to improve water quality and reduce supply restriction risks for 305,000 properties,

⁶³ £78m-£162m when updated to reflect the CMA PDs (noting Anglian does not agree with the PD models – see Chapter B1).

submitting SoC Annex 13 (*Anglian, Asset Health Investment Focus*) to explain the immediate asset health needs and related risks for customers and resilience providing storage points defects data (SoC, Figure 14). Likewise for gravity sewers, SoC Annex 13 detailed the challenges facing these assets and additional funding needs. Since the ASRAP, there has been a substantial deployment of Dynamic Sewer Visualisation (“**DSV**”) Monitors across Anglian’s network that have provided significant insights on the scale of issues that need to be addressed (eg. sewer defects and leaks that can cause blockages for customers or pollution incidents). These insights, together with the base-cost squeeze ultimately imposed in Ofwat’s FD, led Anglian to make this alternative claim in its SoC.

- (252) Further supporting data has also been requested by Ofwat in the Roadmap process, namely estimated date of construction and construction method for all storage points, which as noted in Anglian’s SoC show the average age of these assets to be 50 years (ANH SoC, ¶303). Ofwat has also requested increased data on gravity sewer faults (where Anglian’s response will include information gathered as a result of its DSV Monitors). Anglian can provide this data to the CMA if it will assist in its considerations.
- (253) However, stepping back, Anglian’s Storage Point and Gravity Sewers claim, as per its SoC, followed base underfunding in the Ofwat FD that was not anticipated at the time of the ASRAP, and which meant that Anglian was no-longer able to manage these risks within its base envelope. It is essential to recall that:
- (i) Anglian’s base costs were underfunded by a notional 5% (or £286m) at Ofwat’s FD vs. Anglian’s BP, forcing Anglian to submit its CAC (including after its request for a wider use-it-or-lose-it allowance at DD was rejected).
 - (ii) The PD has exacerbated this position, cutting Anglian’s base allowances further, and reducing Anglian’s overall capital maintenance allowance by up to 22% (see Chapter C).

- (254) This additional harm to asset health is inconsistent with the CMA's recognition that asset health "*is a crucial issue*" on which "*there is a pressing need for further progress to be made*", and that the redeterminations take place at a time where there are "*increasingly serious risks*" to water "*quality*" (PDs, ¶2.3 and 4.235). While the PD acknowledges that the ASRAP was submitted pre-Ofwat's FD (PDs, ¶4.287), it provides no analysis as to why it considers this (further) cut does not harm these assets.
- (255) If the PD position is maintained, Anglian will be wholly dependent on the asset health reopener to address the critical investment needs for its Storage Point and Gravity Sewer assets, which have become more acute since 2023.
- (256) Anglian disagrees with the CMA's views that "need" has not been shown because base allowances "*are not intended to remunerate... shorter-term peaks of expenditure*", and that if an activity involves long-lived assets "*allowances should be below actual base totex requirements in some periods, and above actual totex requirements in others*" (PDs, ¶4.278-4.279). It would be wrong and unevidenced to deny funding on this basis, unless the CMA can show that the assets in question are indeed funded properly and consistently over the long-term, and that inter-generational fairness considerations are being correctly addressed for customers.
- (257) It is unclear – and the PD provides no reasoning to explain – why the CMA is confident that Gravity Sewers and Storage Points assets have been so funded. This is given the significant evidence the CMA has received around long-term underfunding of capital investment, the inconsistency and uncertainty in long-term base funding allowances created by the PD employing entirely new base modelling to that in previous periods, and in light of the evidence in Annex 13 of Anglian's SoCs of the harms to customers that Anglian is seeking to mitigate via this claim.
- (258) Anglian respectfully submits that the CMA should:

- (i) Either assess the evidence in full, including SoC Annex 13, which shows that there are immediate needs, given Anglian's concerns over the Roadmap.
- (ii) Alternatively, if the CMA considers that the assessment of the evidence should be deprioritised in light of the Roadmap, the CMA's FD should be clear that it has not assessed evidence beyond the ASRAP and that it considers that the assessment of that further evidence should occur in the Roadmap. This is because a partial engagement with the evidence (such as that at PD para. 4.287) risks pre-empting and unjustly prejudicing the consideration of these funding requests by Ofwat in the Roadmap process.
- (iii) If no funding is granted and the reductions in Anglian's modelled base costs persist at FD, the CMA should articulate why it is satisfied that in light of its duties and its concerns around the pressing need to address asset health and water quality, it is correct to further reduce Anglian's base allowances, which fund asset maintenance for all assets, including Storage Points and Gravity Sewers.

5 Water mains renewal sector-wide adjustment

5.1 0.3% mains renewals rate assumption is not supported by evidence and wrongly retrospectively penalises companies

(259) A point on which four of the five DCs all agreed was that the way in which Ofwat had computed the Implicit Allowance for mains renewal across the industry was an error.

(260) In its SOC Anglian challenged Ofwat's assumption that the base cost models funded 0.3% pa of mains renewal on four main grounds:

- (i) Because all companies are weighted equally in the assessment of historical renewal rates, there is disproportionate reliance on small, unrepresentative networks such as Portsmouth Water

- (ii) There is no reason to exclude 2023/24 data from the assessment of renewal rates, particularly when this year is included in cost modelling and in determination of the catch-up benchmark
 - (iii) There is a time inconsistency between the twelve years used by Ofwat to determine the historical renewal rate (2011/12 – 2022/23, ‘the full historical modelling period’) and the five years used to determine the catch-up benchmark (‘the benchmark period’)
 - (iv) The industry mains renewal rate should be determined with reference to the renewal rates of the companies that determine the catch-up benchmark since they may have achieved their frontier position by virtue of atypically low renewal rates.
- (261) The CMA agrees with Anglian in respect of point (ii). It disagrees with Anglian’s arguments in respect of points (i), (iii) and (iv). While Anglian disagrees with the CMA on point (iv) it does not contest it further.
- (262) On point (i), as the goal is to define the industry level of activity over the relevant period (leaving to one side for a moment the question of what that period should be), then the correct approach should be to view the performance of the industry as a whole over that period. In the case of mains renewal, this amounts to the sum of industry mains renewal over the period divided by the aggregate length of mains.⁶⁴
- (263) In paragraph 4.314 of the PDs, the CMA reported that Ofwat disapproved of the idea that a weighted mean should be used on the grounds that it would place disproportionate weight on large companies.
- (264) In Paras 4.300 and 4.339, the PD states: “*Our provisional decision is to calculate what base buys using historical data from the period 2011/12 to 2023/24, using a within-company mean (for a representative level of activity by an individual company over this period) and a between-company median (for a representative level of activity across the industry)*” and that

⁶⁴ As one is considering the rate of replacement over the chosen period, the correct aggregate length should be as at the mid-point of that chosen period.

a weighted mean is “inappropriate” as it “*could allow the performance of one or two larger companies to distort the estimates if they are particularly good or particularly poor performance*”.

- (265) By definition, a weighted average gives a proportionate weight to each company, large and small, and therefore avoids distorting the estimates. By contrast, an unweighted average gives the same weight to each company regardless of size. In terms of mains length, leaving Hafren to one side (given their very small mains length of c. 2,650km), the smallest company in the industry is Portsmouth Water at just over 3,400 km. The largest, United Utilities has a mains length of just over 43,000km, more than twelve times as long. So, a 1% replacement rate of mains for Portsmouth represents 34km whereas for UU it represents 430km. It should be uncontentious to say that giving Portsmouth’s growth twelve-fold more weight than that of UU is disproportionate, and results in precisely the distortions that the PD states that the CMA seeks to avoid.
- (266) On point (iii), the CMA considers in detail the length of the time series to take into account in determining the renewal rate that has already been funded by the base cost models. It considers the changes in renewal rates across the full historical modelled period, possible reasons for the decline in renewal rates across that period and the impact on renewal rates of the changes to Ofwat’s approach to setting base cost allowances at PR14. Agreeing with Ofwat, it concludes that it is appropriate to use data from the full historical modelling period to estimate what base buys.
- (267) However, finding the renewal rate that is reflective of activity across the full historical modelling period is answering the wrong question. The PD cites Ofwat’s assertion that ‘*the base models determined allowances based on the full historical period*’ (PDs, ¶4.313). However, while data from the full historical period are used to define the relationship between companies’ expenditure levels and the exogenous variables that influence those costs - the allowances are determined by the catch-up efficiency challenge,

which is determined by expenditure levels in the last five years' of outturn data used to set the benchmark.⁶⁵

- (268) The PD does not engage with the basis of Anglian's challenge; namely, that there is a fundamental inconsistency between the time periods used, respectively, to assess the: (i) cost efficiency; and (ii) mains renewal activity levels. Its arguments about whether the AMP7 period is representative of the activity levels over the full modelled period are not relevant given that the allowances are not determined by expenditure in this period. The PDs do not engage with what the benchmark period represents, which is essential to respond to the challenge Anglian raised in its SoC (ANH SoC, ¶218).
- (269) The attached paper by Economic Insight provides a more detailed explanation of the point raised by Anglian (see Annex 008). It sets out that the efficiency benchmark challenge reflects the benchmark company's average activity level during the benchmark period relative to that of all companies over the full historical modelling period; the inconsistency of the CMA's choice of time period for determining funded renewal rates with the period that determines modelled cost allowances; and the difference between the renewal rate estimated by the CMA to be what base buys and the rate that is implicitly funded through modelled allowances.
- (270) Anglian tested the logic of its contention by re-running the CMA's own water base cost models on the assumption that companies had carried out 0.3% pa renewals during the benchmark period – the assumed 'funded' rate that Ofwat and the CMA assume for AMP8. The process for this analysis was to substitute in the modelling dataset all companies' actual expenditure figures for the years 2019/20 – 2023/24 with assumed expenditure levels. These were calculated for each company using the following formula:

$$AMP7 \text{ expenditure}_{assumed} = AMP7 \text{ expenditure}_{actual} + ((0.3\% - x\%) * \text{efficient unit cost})$$

⁶⁵ Ofwat (2025), 'PR24 Final Determinations: Expenditure Allowances', page 27 (See [here](#)).

Where,

- *0.3% is the level of mains renewals assumed by the CMA*
- *x% is the level of mains renewals actually undertaken by the company in question*
- *the efficiency unit costs are £1,180 / metre for Thames Water and £300/metre for all other companies⁶⁶*

(271) This analysis shows that if base spend had been committed to deliver a 0.3% target during the benchmark period, it would have led to considerably larger allowances for all companies at AMP8. At an industry level the modelled allowances would have risen by 4% (£868m) while for Anglian the increase would have been 5% (£92m).⁶⁷

(272) Oxera has also undertaken further sensitivity analyses, such as simulating the impact of a x% increase/decrease in main renewal rates applied to each period separately (2011/12–2018/19 or the benchmark period 2019/20–2023/24) to highlight the overriding determinant of activity levels/costs over the benchmark period in determining base cost allowances, and, by extension, ‘what base buys’.

(273) Unsurprisingly, in all cases the industry base cost allowance is significantly more sensitive to mains renewal rates and associated costs over the last five years. In other words, higher mains renewal rates during the benchmark period mechanistically result in higher cost allowances for the sector than higher renewal rates during the non-benchmark period. This is despite the fact that the benchmark period comprises only five years, compared with eight years for the non-benchmark period, further illustrating both the seriousness of the issue and the logical issue with the PD’s current approach.

⁶⁶ Anglian does not make any adjustments to reflect higher or lower wage levels, as the CMA did in adjusting efficient unit costs, because wages are already included in the TWD model, and making such adjustments would result in double counting. The WRP model remains unchanged, as this cost area is not relevant to mains renewal activities.

⁶⁷ This analysis is provided in the mains renewals datapack in Oxera Datapack for Chapter B2 (Annex 006).

- (274) It should be noted that Ofwat’s methodology for calculating the implicit allowance was first set out after the end of the financial year 2023/24 so the presumed perverse incentives argument raised by Ofwat to reduce levels of expenditure to influence the assessment of what base buys does not hold. This was acknowledged by the CMA itself (PDs, ¶4.335) *“This may be appropriate if water companies had the ability and incentive to behave in this way. However, this is not the case. As the proposed methodology was first set out in Ofwat’s PR24 DD in August 2024 (ie after the end of the financial year 2023/24), companies could not have adjusted their investment plans for 2023/24 and the impact of individual company decisions on sector-wide averages would be limited”*.
- (275) Since the perverse incentive has already been ruled out by the CMA and can legitimately not be questioned—given that the methodology was revealed after 2023/24 had concluded—there is no rationale for failing to estimate what base buys solely over the benchmark period.
- (276) Elsewhere in its consideration of the sector-wide cost adjustments, the CMA reversed Ofwat’s decision to apply adjustments for perceived under-delivery of funded outputs in prior years. The CMA’s assessment, which Anglian strongly supports, is that *‘given there were no specific base funding activity targets in the PR19 settlement, it is not possible to definitively demonstrate under-delivery by comparing company activity data for specific asset categories relative to business plan forecasts and/or the rest of the industry’* (PDs, ¶4.437(c)). The CMA also expressed concern about the impact on incentives for efficiency for retrospective claw-back in an unanticipated way (PDs, ¶4.437(d)).
- (277) Anglian contends that the CMA’s assumption of a funded mains renewal rate in excess of companies’ actual mains renewal rates over the benchmark period is inconsistent with this policy on retrospective claw-back. In assuming that companies delivered 0.3% pa of mains renewals in the past, when only PRT did during the benchmark period, and denying them the future funding necessary to deliver this level of mains renewals in the future, the CMA effectively penalises companies for not having

delivered 0.3% historically. The values of these claw-backs are those set out in para. (271) above.

(278) The CMA observes that some companies explained that their low mains renewal rates were because they had achieved the objectives of mains renewal, such as reduced leakage and fewer bursts, without having to replace mains (PDs, ¶4.331). Anglian's response to this is as follows:

(279) Firstly, these activities would be entirely consistent with the nature and incentives of the regulatory framework (which the CMA recognises in its arguments against under-delivery adjustments). The CMA did not find evidence that the choice to invest in these operational solutions could be considered as 'gaming' the settlement. Anglian sees these as responsible and legitimate responses to the totex and outcomes regulatory incentives of PR19 and PR24, which were intended to deliver customer priorities such as fewer supply interruptions and less leakage in the most efficient manner in light of its overall totex envelope and asset management needs.

(280) Secondly, funding that may have originally been targeted at mains renewals was by no means all spent on alternative activities that achieved similar outcomes to mains renewal. In the case of Anglian, which overspent its PR19 water base allowances by 8.4%, pressures on funding came from a variety of sources, including the energy price rise, responding to major incidents and having to invest in other assets in even greater need of maintenance, such as storage points and boundary boxes. While some – though by no means all - of these pressures were 'one-off' and unlikely to recur, history tells us that others will replace them (and Anglian's SoC indeed details the (wrongly) unfunded additional pressures it will increasingly face from the two latter asset classes at AMP8).

(281) Thirdly, Anglian is concerned that the CMA appears to view these alternative solutions as temporary activities that will cease to incur expenditure in future. The CMA's observation that "*the very low renewal rates observed in AMP7 may not be reflective of what base could reasonably be expected to buy over AMP8*" (PDs, ¶4.333) implies that the assumed replacement rate of 0.3% pa is funded for AMP8 because the

prior strategy to invest in operational solutions can be ‘halted’ and the funding reallocated to mains renewal. This is not the case.

(282) As noted in its SoC, Anglian agrees that mains renewal rates need to increase. This was reflected in its CAC through a 0.54% annual rate (ANH SoC ¶224), “[h]owever, this need for increased renewals is a different (and irrelevant) consideration to what renewal rate is achievable with the allowances provided driven by an approach to setting base allowances derived by econometric models utilising historic data” (PDs, ¶225).

(283) If the disconnect between the ‘what base buys’ assumptions and the econometric modelling mechanisms that determine the actual AMP8 funding is not addressed, the industry will remain underfunded to renew mains at a minimum annual rate of 0.3%. The stretching nature of the performance commitment levels which Anglian has to achieve in PR24 means that Anglian will continue to rely on further application of operational life-extending solutions (eg. pressure management). It noted in its Business Plan⁶⁸ that Anglian anticipated continuing to use technology and innovation to seek base improvements at AMP8 “*particularly through condition based monitoring and maintenance, increasingly optimised smart networks and digitally supported operations that help our field teams to respond*”. The assets that have been installed in previous price reviews in response to the totex and outcomes framework that have already led to performance improvements that will require ongoing maintenance. They also incur ongoing costs, such as labour for their operation, fuel for emergency tankers and batteries for sensors.

5.2 Impact on the water mains renewal PCD

(284) Reaching an assessment of ‘what base buys’ which, by inference, requires companies to abandon these alternative investments in order to redirect funding to mains renewal or risk the funding being clawed back, creates a risk of deteriorating service to customers. In this context the definition of the price control deliverable (PCD) is critical. By definition, if the PCD

⁶⁸ Anglian, Our PR24 Business Plan (October 2023), page 94 (See [here](#)).

requires the funding to be spent on mains replacement, it is no longer available to sustain the ongoing costs of the operational solutions which enabled Anglian to achieve performance improvements in AMP7. This topic was explored in detail by the CMA at PR19 in relation to leakage costs, where Anglian provided evidence of the whole life costs of fixed correlating noise loggers. Essentially, whilst the PR19 redetermination allowed the cost to install those monitors, the CMA's provisional determination now removes the funding to run them. Anglian set out its concerns about the undue prescription and impact on efficiency of the PR24 PCDs in its Statement of Case (ANH SoC, ¶585-587). This definition of the PCD should be considered in light of the context that: (i) Anglian materially overspent its base allowances at AMP7 even when utilising these lower-cost operational-solutions; and (ii) AMP8 capital maintenance funding is now significantly over-stretched, restricting Anglian's ability to undertake additional activities outside the PCD.

- (285) Anglian therefore asks the CMA to look again at the calculation of the Implicit Allowance for proactive mains renewal and the associated element of the PCD funded within base (see additional comments in Chapter E.2). The FD should ensure that there is sufficient funding included within Anglian's overall base allowances to enable the Company to carry out network optimisation as well as meeting its mains renewal responsibilities and responsibilities to Anglian's other asset classes. By requiring a level of asset renewal from existing funding, the PCD removes flexibility and available funding to invest in the full range of options and makes meeting the PCLs in water networks such as Supply Interruptions, Mains repairs and leakage far more challenging. Despite the limited interventions in these areas in the PD, there remain powerful incentives to deploy highly effective operational solutions in the short-term and re-prioritise funding away from asset replacement, whilst at the same time removing the option to invest in these approaches, by providing insufficient base allowances in the round.

6 Retail

(286) The PD rejects Anglian's request for its Retail allowance to be updated on the on the following grounds (PDs, ¶3.37):

"We find that the necessary data collection and verification exercise would be onerous, time consuming and not fully under our control, contrary to the responses we received. We would need all water and wastewater companies, not only the Disputing Companies, to submit data. It would also require us to assess all companies' forecast bills, cross-check these against business plan figures and rely on companies responding sufficiently promptly to our requests for clarifications. Finally, we would need to update models we would not otherwise be changing."

(287) The CMA has misunderstood Anglian's request. Anglian asks only for a simple update to one variable in PR24-FD-CA11-Base-costs-residential-retail-model-2.xlsx. No model rerun is required or requested, no data collection from other companies is needed, and the CMA already holds all necessary data.

(288) This request ensures simply that Anglian receives equal treatment, as Ofwat's FD already reflects updated forecast numbers for many other companies.⁶⁹

6.1 Where do the updated numbers need to go?

(289) The variable concerned is Ofwat's "average bill (£/hh)". This is not the Company Financial model metric reported by Ofwat in its FD, but simply the reported forecast annual household revenue divided by customer numbers. The cells to be updated are within PR24-FD-CA11-Base-costs-residential-retail-model-2.xlsx (Forecasts tab, row 38, cells AA38-AE38).

6.2 How are the numbers derived?

(290) The calculation (from Ofwat's STATA do file for Retail, lines 147-149) is:

⁶⁹ Per Anglian's Reply to Ofwat's Response (2025), (See [here](#)) some companies provided these forecasts in table RR27 of their final post DD reps, Nov 2024) data submissions. There was no requirement from Ofwat to complete these tables and at the time Anglian did not provide this to Ofwat. However, the data with RR27 is drawn from other data within the tables that were submitted.

(291) $\text{Average Bill£/hh} = \text{Household allowed revenue} / \text{Total Households connected}$

- (i) Where: Household allowed revenue = $\sum \text{Allowed revenues} \forall \text{ price controls including residential retail}$
- (ii) And for each price control: Allowed revenues in each year = Allowed annual revenue x (Measured charge residential real revenue share + Unmeasured charge residential real revenue share)

6.3 Where can the numbers be found?

(292) The data sources are:

- (i) Total Households connected can be found on the Forecasts tab of PR24-FD-CA11-Base-costs-residential-retail-model-2.xlsx, row 11, cells AA11 – AE11
- (ii) The allowed annual revenue for each wholesale control can be found in the Provisional Determination Financial model for Anglian, in tab Output RR10, rows 30 to 38.
- (iii) The measured and unmeasured charges residential real revenue shares can be found in the Provisional Determination Financial model for Anglian, in the Inps tab, rows 1256 to 1278.

6.4 Need to update Frontier Shift

(293) The CMA chose to deprioritise bioresources and retail cost assessment. On frontier shift the PD also states that “*We provisionally decide to apply the frontier shift to all expenditure allowances [...]. This is the same approach as Ofwat’s PR24 FD. ...*” (PDs, ¶4.187).

(294) The CMA has updated the Frontier Shift for Bioresources without addressing Bioresources from a cost modelling perspective. However, as previously stated, it has not done the same for retail. Anglian therefore requests, as above, that the CMA update the Controls tab of PR24-FD-CA11-Base-costs-residential-retail-model-3.xlsx, changing the Frontier Shift from 1% pa to 0.7% pa.

6.5 Need to update inflation forecast

- (295) In **Base costs – residential retail model 3**, Ofwat calculates the Retail allowance in real terms and then computes the nominal allowance on the Final nominal allowances tab. This takes the output on the Real allowance tab and multiplies those real allowances by the inflation forecast across AMP8 set out on the Inflation index tab in cells B7 – B11.
- (296) In its analysis of the Capital Asset Pricing Model, the CMA has put forward a 40bps wedge between CPI and CPIH in AMP8. As a consequence, it uses a forecast of 2.4% pa across AMP8 for CPIH. Anglian explains the material robustness issues with the PD's CPIH assumption in Chapter F (Risk & Return), and asks the CMA to reconsider this assumption for its FD. Anglian requests that the inflation assumption applied by the CMA throughout the FD is consistent, and that the Retail model is therefore updated with its final decision on this point.

Chapter C

Asset Health

Anglian's asset health position is critical and severely overstretched at a time when multiple pressures are bearing down on the system—from the chronic underfunding of ageing infrastructure to the failure to reflect the forward looking impacts of climate change on Anglian's asset base. The CMA's PD have made this critical situation worse by imposing a further 4% reduction in modelled base allowances (beyond the FD's existing shortfall) whilst rejecting Anglian's CACs, directly contradicting the IWC's direction of travel to place less emphasis on econometric models, with an urgent need to understand and improve asset health.

The impact of chronic underfunding is already visible and worsening. The Environment Agency has identified "*poor asset health, underinvestment in maintenance and replacement of aging infrastructure*" as driving persistent sector problems, and trunk mains replacement rates are orders of magnitude too low. The PD's efficiency challenge, when properly understood as falling predominantly on capital maintenance, represents an unachievable 22% challenge on proactive capital maintenance.

Customers understand this: 92% agree that Anglian should invest now in maintaining assets to avoid future disruption, with 84% willing to pay more for proper maintenance. Anglian urges the CMA to act - whether by granting its CACs, or another proposed solution, namely granting the use-it-or-lose-it capital maintenance mechanism Anglian proposed at FD, or establishing a broader gated mechanism - to prevent deteriorating service, environmental harm and higher costs for future customers.

(297) Anglian acknowledges that the CMA is asked to redetermine PR24 only, and that wider reform for future price review is already underway via a separate workstream at Defra/ However, Anglian does also consider the Independent Water Commission's findings relevant, and note that the PDs are in direct contrast to the Cunliffe Final Report's direction of travel to place less emphasis on econometric models, with an urgent need to

understand and improve asset health⁷⁰, and with the widespread evidence of the concerns expressed and steps taken by third-parties to secure action on asset health (e.g. via the concerns or actions of DEFRA, Reckon, WICS and Alan Sutherland).⁷¹

(298) One example of this which has arisen since the hearings is Ofwat's data request to all water companies regarding the replacement rates of trunk mains. Although, as shown by the PD's Figure 4.9, the replacement rate of water mains has decreased over time and is now considered to be lower than would be required to maintain the long term 'productive capability' of the assets, this data request has revealed that replacement rates of larger diameter pipes are orders of magnitude lower than for the generality of smaller diameter pipes.

(299) Anglian also acknowledges the opportunity to apply for increased funding for some asset classes via Ofwat's cost change process which remains subject to finalisation. However, as set out in Anglian's SoC (ANH SoC, ¶322) and in the hearings,⁷² the FD significantly underfunded asset health, and Anglian's request was to ensure that capital maintenance is sufficient for AMP8 'in the round'.⁷³ The PDs reject Anglian's claims for additional funding to maintain boundary boxes, frontier leakage, storage points and gravity sewers, as well as reducing base funding even further compared to the FD (which was already a nominal 5% lower than Anglian's request in PR24 (ANH SoC, ¶199)). Given this, Anglian consider that were it to be confirmed as the final re-determination, the CMA's allowances would put it

⁷⁰ Independent Water Commission, Final Report (21 July 2025), para. 417 (See [here](#)).

⁷¹ See for example Anglian's SoC (para. 326-330), Alan Sutherland, Insights from debates on Asset replacement in Scotland, page 21-22 and 60 (See [here](#)) ('It is customers and communities now and into the future who suffer if assets are not properly stewarded' and 'There is no obvious reason why the approach taken in Scotland could not be applied to the privatized water industry. It should be. Customers care about the resilience of the service that they receive') and Reckon, Opportunities for improving Ofwat's approach to asset health following the PR24 draft determinations (28 August 2024), page 4 (See [here](#)) (improving asset health requires "complementary reforms across different parts of the regulatory framework, rather than making changes to one part in isolation").

⁷² CMA, Notes of a hearing with Anglian Water and Ofwat held at The Competition and Markets Authority, Cabot Square, London on 7 July 2025 (Final Non-Confidential), page 8, lines 12-17.

⁷³ This was seen in the alternative formulation of Anglian's gravity sewers and storage point claim in para. 42 of its Statement of Case, Anglian Water and its concerns over the implications of retrospective funding mechanisms Statement of Case (21 March 2025, para 7(iv) (See [here](#)).

even further beyond an acceptable level of risk. The PDs place significant reliance on the Ofwat Roadmap and cost change process to rectify this (PDs, ¶4.232-236).

(300) However, the underfunding of capital maintenance is already affecting service to customers and the environment, as noted by the Environment Agency in their August 2025 report⁷⁴, “*The data and intelligence we are collecting with more staff, new monitoring tools and our improved digital capability is highlighting persistent problems across the sector. These are due to poor asset health, **underinvestment in maintenance and replacement of aging infrastructure** as well as reduced resilience due to the impacts of climate change.*” Anglian is now in discussion with the Environment Agency about the opportunity to use their compliance visits to collect more asset health data.

(301) In para 4.287 the CMA acknowledges that the PR24 FD base allowance was 5% lower than requested (but does not also acknowledge that the PD modelled base allowances are now also reduced by 4%, and the delta between total base allowances in the PD and Ofwat’s FD is between £66m and £117m).⁷⁵ Within the base allowance the majority of funding is for opex to cover costs such as energy, chemicals and labour. Operational costs cannot be reduced without securing efficiency or reducing activity that has near term operational consequences. In contrast, proactive capital maintenance, including asset renewal, can be varied more readily in the short term. As such, where funding is lower than can be delivered through efficiency gains in the short term, reductions in asset renewal is the rational consequence (ANH SoC, ¶200). The PR24 PDs efficiency challenge if taken as a proportion of capital maintenance alone moves from 7% at Ofwat’s FD to 22%.⁷⁶ Given large elements of capital maintenance are tied

⁷⁴ Environment Agency, Water and sewerage companies in England: pollution incident report for 2016 to 2024 (18 July 2025), section 8 (See [here](#)).

⁷⁵ £117m is post-correction of the lambda error. The delta with the PR24 FD is based on Table 9.1 of the PD.

⁷⁶ This is the gap between Anglian’s Water and Wastewater N+ base costs for AMP8 as shown in Table 53 of Ofwat’s FD expenditure allowance document (page 384) and the comparable PD base cost figures, expressed

to PCDs, or committed to unavoidable reactive replacement such as boundary boxes, this is a material challenge that will inevitably lead to further reductions in proactive maintenance, even with a repeat of the base overspend seen in AMP7.

(302) Table 8 below illustrates the impact of the PDs in practice. When accounting for the: (i) metering, mains renewal and Boundary Box implicit allowances; (ii) the value of Anglian's boundary box and leakage CACs, Anglian is left with just £149m over 2025-2030, or £30m per year (20% of its Water Base CAPEX excluding network reinforcement) to cover all other water capital maintenance spend on all of its other assets – eg. 380 storage points, 130 water treatment works, 433 boosters, over 450 boreholes and more. This is not reasonable or attainable.

Table 8 Asset maintenance as % of Water Base CM (excluding network reinforcement)

Base CM Item	PDs expenditure allowance 2025-2030	% of Water Base CM (Excluding network reinforcement)
Total Water Capital Maintenance (Base capex excluding network reinforcement CAC & Implicit Allowance)	£747m	100%
Metering, mains and Boundary Box Implicit Allowances & industry CACs	£392m	52%
Boundary Box and leakage CACs	£206m	28%
Remaining Water Capital Maintenance for all other assets (eg. storage points, water treatment works, boosters, boreholes and more)	£149m	20%

as a percentage of the Water and Wastewater N+ base capex, taken from PR24-FD-CA22 opex capex split model clean.xlsx (See [here](#)).

- (303) Whilst the PDs discuss alternative approaches to the derivation of capital maintenance allowances, they describe the WICS approach as time consuming, and effectively rules out the use of this method due to a lack of time available in the redetermination process, noting that such an exercise would be best completed with all companies rather than only the Disputing Companies (PDs, ¶4.231-233).
- (304) To test Anglian's common assertion of persistent underfunding of capital maintenance over successive price reviews, Anglian have collaborated with the other DCs and consultants Economic Insight to prepare a WICS style analysis. This essentially replicated the process used for the Strategic Review of Charges (SRC) and, as with Scottish Water, shows systemic underfunding of asset replacement allowances in England. Given the CMA's decision to de-prioritise wider reform of Asset Health, Anglian does not submit this report and will instead consider its use as part of wider engagement on the topic. However, the exercise is another important piece of evidence which lends weight to the view that current base allowances are insufficient to maintain the 'productive capacity' of the assets in the long-term. This conclusion applies to all asset classes, not only those covered by the Asset Health Roadmap.
- (305) Volume 1 of the PD documents takes care to examine the issue of affordability for customers in the opening sections, but makes no reference to inter-generational affordability. The choices of the current generation to limit spending on asset replacement risk a longer-term increase in bills for reactive expenditure associated with asset failures, which in turn will affect performance. Anglian's own customer research at PR24⁷⁷ noted *"Keep assets regularly maintained - the overall consensus (92%) is that you should invest and act now on maintaining both general assets and assets vulnerable to climate change to avoid potential future disruption, water loss and higher costs of repairing broken assets later down the line. Educate about the issue - **maintaining assets is something 84% of customers are willing to pay around 5-10% more for per year in their bills and***

⁷⁷ Anglian Water Customer Engagement, Synthesis Report, page 66 (See [here](#)).

customers are more likely to be accepting of this if they're aware of the consequences that might occur if assets are left to deteriorate. Focus on climate vulnerable assets - customers are also open to investment in priority areas, such as assets and mains vulnerable to climate change. It's good to start somewhere and have a specific focus on particular assets that might need the most focus."

(306) In its SoC (ANH SoC, ¶75) and response to the CMA's A&P Document (¶32), Anglian requested that the CMA grant its CAC claims, correct Ofwat's error of retrospectively penalising several companies for historic mains renewal levels, call for timely action to affect an asset health step-change, and take a view on the adequacy of capital maintenance funding available to companies at PR24. While Anglian is pleased that the CMA has removed some retrospective penalty mechanisms deployed in the PD, the practical effect of the PD is to damage asset health. In light of this, the evidence above, and the findings of IWC, Anglian argue that action is required by the CMA to address this before FD. Anglian have considered several approaches to implement this change:

- (i) Granting the Cost Adjustment Claims in Anglian's Statements of Case (discussed in Chapter B.2) and restore the Ofwat FD models for its base costs (discussed in B.1);
- (ii) As advocated for in Anglian's DD Representations, apply a post modelling adjustment to create a 'Use It or Lose It' allowance for capital maintenance for the Disputing Companies, with an option to prescribe that this allowance is for use on asset classes that are not in scope of the Asset Health Roadmap re-opener; and/or
- (iii) As with Thames Water's PR24 FD and requested by Southern Water in its Statement of Case, create a gated allowance for asset health that can be accessed during the AMP for any asset class, rather than the shortlist of eligible asset classes defined within the Asset Health Roadmap reopener.

Chapter D

Enhancement

Anglian did not dispute its enhancement allowances at Ofwat's Final Determinations and welcomed Ofwat's positive efficiency assessment. Anglian accepted the overall enhancement package **in the round**, recognising both upsides and downsides, to secure a balanced settlement, with Anglian's programme within two per cent of Ofwat's benchmark and tested thoroughly.

However, the PD takes a narrow focus on selected enhancement elements raised by some of the Disputing Companies. This approach introduces arbitrary changes for Anglian, distorting the careful equilibrium of Anglian's original package and overlooking areas where it accepted negative adjustments by Ofwat at FD.

Anglian's **phosphorus removal** costs were rigorously challenged and benchmarked before submission. The CMA's new modelling, reliant on requested totex and statistical grouping rather than engineering logic, risks rewarding higher cost projections and disadvantaging companies focused on efficiency long-term value for customers. Anglian's analysis shows that a higher cost submission would have led to a greater allowance, indicating that the models do not achieve their intended effect of determining efficient allowances, contrary to the efficiency duty and weaken the incentive to manage costs effectively. Anglian requests that the CMA revert to a modified version of Ofwat's Final Determination P-removal models for Anglian, allowing for engineering deep dives to address specific issues raised by companies through their statements of case. This would be a more reasonable and proportionate approach to determining Anglian's allowances than the PD approach.

The challenges facing Anglian have become even more acute in recent months. In August 2025, the government announced that it would no longer provide funding from the Housing Infrastructure Fund for the planned relocation of the **Cambridge Water Recycling Centre**. This marked a decisive reversal of years of national policy, leaving the Cambridge area, which is at the heart of the government's £78 billion Oxford-Cambridge corridor growth agenda, with considerable cost uncertainty for essential water infrastructure. Previously, Anglian and other stakeholders had planned for the relocation and redevelopment of the WRC to unlock new housing and economic growth, with costs intended to be covered by government funding rather than local customers.

The withdrawal of this support means Anglian now faces substantial unfunded costs to maintain and expand the existing facility in order to support the region's ambitious development targets. Given the urgency and the lack of a defined funding route, Anglian has worked closely with Ofwat and government departments to seek a solution. All parties agree that the CMA redetermination process offers the most practical way to provide the necessary funding flexibility and certainty. Anglian therefore requests a gated allowance process for the Cambridge WRC, which would ensure that only efficient, incremental costs are recoverable. This approach protects customers while enabling delivery of the infrastructure essential to national growth ambitions.

Furthermore, Anglian's region is subject to intense development pressures that directly impact its **sewage treatment works**, with government expectations for accelerated housing and economic growth now far exceeding what was assumed when original allowances were set by Ofwat. Pressures have further increased with evolving environmental standards and changing local development plans. Anglian did not challenge growth enhancement allowances at the outset under its "enhancement in the round" approach, but, in light of externally driven shifts and escalating requirements, the current funding envelope is clearly insufficient. Deferring cost recovery through Ofwat's ongoing process, with decisions not expected until late 2027 and no funds available before 2030, does not match the urgency and scale of the government's growth agenda. Anglian asks the CMA to recognise that the current growth allowance is insufficient in light of material external changes, and to provide appropriate mechanisms (as described below) to enable timely and effective cost recovery aligned with the pace and ambition of national and local growth and environmental objectives, rather than delaying funding until the next regulatory review.

1 Enhancement in the round

(307) Anglian accepted its enhancement allowances in the round – recognising that there were both upsides and downsides to its settlement – because that is how the enhancement package was set. In the round, Anglian's enhancement programme was assessed as efficient, within 2% of Ofwat's view, supported by extensive benchmarking and the 'double lock' efficiency process. During the redetermination Anglian noted that whilst it had issues

with some individual elements of enhancement allowances, (examples were provided in para 396 of Anglian's SOC, and the Enhancement (general) section of Anglian's post hearing submission highlighted Anglian had accepted negative adjustments to its allowances) its allowances in other areas of its settlement made the package acceptable in the round.

(308) However, the CMA's focus on a narrow subset of enhancement, driven by the specific requests of certain other Disputing Companies, has introduced arbitrary changes that distort the overall balance of Anglian's enhancement allowances. The result is a materially more challenging settlement for Anglian, without appropriate consideration of its in-the-round position, including areas of existing downside which it did not challenge as part of its redetermination. This includes a £73m net reduction in allowances across P-removal and interconnectors without having engaged previously with the company on any of its proposed changes. The result of the revised modelling approach is to place significant additional strain on Anglian's enhancement allowances in the round.

(309) This approach, combined with significant base cost reductions and an ODI package which continues to expose the Company to undue risk, results in an unworkable redetermination for Anglian in the round.

2 Phosphorus removal

(310) Anglian welcomes the CMA's recognition – consistent with Ofwat's findings – that its proposed P-removal costs are efficient. Anglian prior to business plan submission took steps through its 'double lock efficiency' approach to ensure costs were efficient, with over £3.5bn of enhancement programme externally and internally benchmarked – as a result, £485m of cost was removed from October 2023 business plan. While the CMA's allowance for P-removal exceeds the company's original bottom-up request, Anglian has been clear that Ofwat's FD allowance is necessary to offset cost reductions elsewhere in the plan. This is to be expected in the way enhancement allowances are set (i.e. by individual investment areas, rather than at a cross-enhancement basis as is the case with base costs). By contrast, the CMA has engaged exclusively on the narrow areas of enhancement raised

by certain of the DCs. This approach fails to factor in wider implications of arbitrary changes on the overall deliverability of companies' enhancement programmes.

2.1 The CMA's modelling framework suffers from a range of critical issues

- (311) At the PD, the CMA has changed the approach taken to P-removal from Ofwat's FD on the basis of its belief that the existing dataset does not enable benchmarking on a like-for-like basis. The CMA claims that this is because the dataset does not capture the specific technology deployed at each individual schemes, or other operating characteristics. In order to overcome this perceived omission from the benchmarking dataset, the CMA employs a modelling approach that clusters the schemes into groups, based on similar characteristics.
- (312) Anglian has two fundamental critiques of the approach taken by the CMA. First, the approach taken does not achieve what it sets out to deliver - it conflates exogenous drivers of higher costs with company- or site- specific inefficiency. Second, the premise of the CMA's approach – seeking to control for the different technologies deployed at different sites – is unsound. The scoping factors, such as the type of technology deployed, that the CMA is trying to isolate are discretionary management decisions in response to external regulatory drivers that are already well captured within the benchmarking dataset Ofwat uses to set its models. The result is a framework that produces model specifications lacking engineering and economic rationale, where higher wages lead to lower costs and smaller schemes are more expensive than larger schemes. Critically, the schemes with highest level of requested costs are allocated to a group that receives higher funding for the same underlying scheme characteristics.
- (313) With respect to the first critique, the CMA's approach fails to protect customers as it does not serve to derive efficient costs. The use of requested totex as an input into the GMR model introduces a material issue whereby two identical schemes – one with inefficient costs and one with efficient costs – would be assessed differently, and in a way which results in inefficient costs attracting a higher allowance.

- (314) Moreover, Anglian considers that the CMA's models fail to achieve the stated objectives of "introduce[ing] some additional flexibility" and "improv[ing] the fit to both the historical and forecast data" (PDs, ¶5.39).
- (315) First, the statistic-based grouping of schemes into three groups lacks engineering rationale. As noted in the next section, the statistical grouping of schemes is counter-intuitive because companies choose the technology installed (endogenous variable within management control) to meet consent limits (exogenous variable outside of management control). This approach of accounting for endogenous variables is not taken elsewhere (e.g. the P-removal opex base adjustment is based on P-consent level, not the technology used on site). However, even if it were correct, the CMA relies on statistical methods using the very same dataset that it assesses as missing this information to infer the impact of these technological differences on efficient costs. The CMA could have instead used the data that, contrary to its claim, has been collected by Ofwat on the technologies that companies are using.⁷⁸
- (316) The CMA suggests that *"the patterns in groupings and coefficients observed in [their] results can at least rule out the risk that the grouping of schemes mostly reflects company-level efficiency"* (PDs, ¶5.77). However, the evidence the CMA uses to justify this assertion is unsound. First, the CMA's observation that no company has all schemes allocated to the same group, does not allow any conclusion to be drawn around whether the grouping process is conflating inefficiency with legitimate cost increases (PDs, ¶5.78). Second, the CMA states that if scheme groupings were primarily linked to company-level inefficiencies then it would expect to see higher estimated 'fixed costs', which it explains are captured by the intercept (PDs, ¶5.79). This is precisely what is observed—with an intercept term for group 3 set at 23.27, 5 times greater than the intercept

⁷⁸ The CMA's model uses the same dataset as Ofwat which does not consider differences in scheme technology types. Ofwat collected relevant data from companies on wastewater treatment technologies for phosphorus removal in its 3rd March 2025 request on wastewater treatment solution type technologies, concurrent to the CMA process. This information, including Anglian's response, for each scheme identifies the solution type and technology used at each treatment stage and could have supported a more rigorous and appropriate assessment of required expenditure that accounted for technological variation.

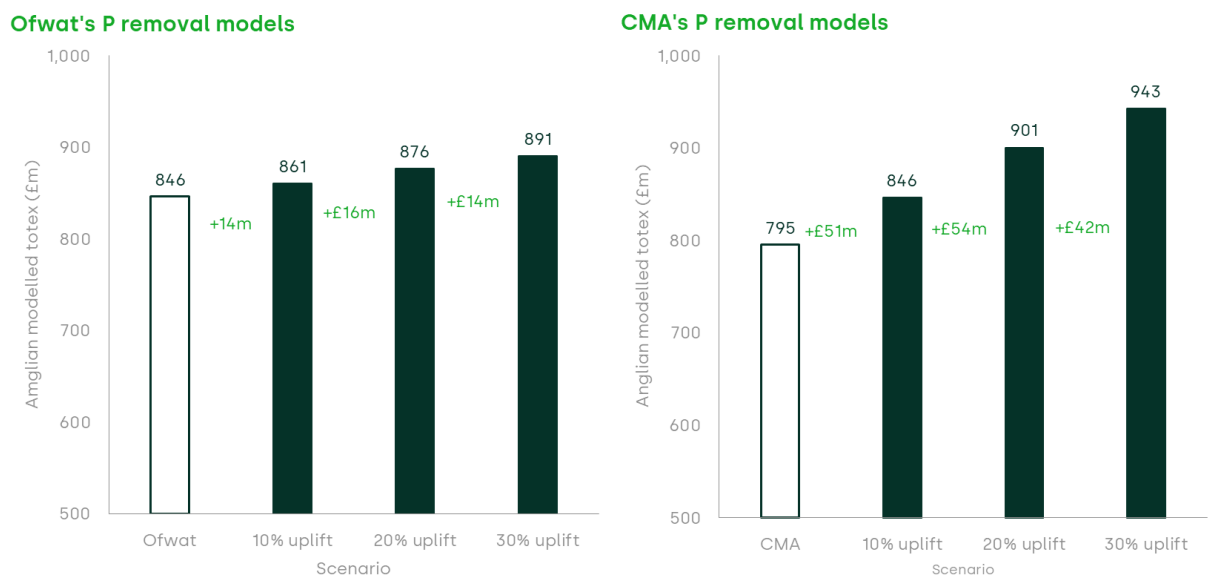
for group 2 (4.27) and 13 times greater than the intercept for group 1 (1.72) PDs, ¶Table E.2). Combined with the CMA's own analysis showing that company-specific factors are statistically significant in explaining requested totex, Anglian considers that this risk cannot be ruled out, and indeed that the CMA's models almost certainly capture company-level inefficiency.

- (317) This creates a fundamental circularity problem, as the model uses the costs submitted by companies to determine the level of allowance they receive, with higher submitted costs leading to higher allowances regardless of efficiency, and efficient schemes potentially being penalised if they have lower requested costs and subsequently lower modelled allowances. This is inconsistent with the consumer and efficiency duties.
- (318) Oxera's reproduction of the CMA's modelling⁷⁹ demonstrates the circularity that results from an approach that assumes higher schemes costs must be driven by legitimate difference, rather than in efficiency. Oxera's analysis, set out below, shows that if Anglian had simply requested higher costs for delivering the exact same schemes in its plan, it would have received a higher allowance under the CMA's approach.
- (319) **When Anglian replicated the CMA's model, and increased its own costs by an arbitrary £70m (no change to scope/ requirements), the model awarded Anglian an additional £51m in allowances.** This illustrates how the CMA's approach creates circularity and rewards higher cost submissions, even when this additional cost is pure inefficiency.
- (320) To quantitatively illustrate the circularity the CMA's framework creates, Figure 11 below presents two bar charts showing the impact on modelled allowances under Ofwat's modelling approach (lefthand chart) and the CMA's approach (righthand chart). This shows the original allowances set by Ofwat and the CMA respectively in the leftmost bar of each chart and then show the impact of increasing Anglian's forecast TOTEX in 10%

⁷⁹ The Oxera replication is submitted as part of the datapack accompanying Anglian's PD response (see Annex 10 (Datapack Chapter D supporting analysis)).

increments (i.e. an overall increase in requested costs of ~£70m in each increment). All other inputs data and aspects of the modelling framework remain the same. Allowances in Ofwat's models do not change significantly, as the only impact of the higher cost is to increase the overall industry cost function. By contrast, within the CMA's framework, changing the forecast cost of individual schemes has a much larger impact on its allowance, as this affects the allocation of schemes into groups.

Figure 11: Sensitivity of modelled allowances to changes in company data under Ofwat's and CMA's P-removal models

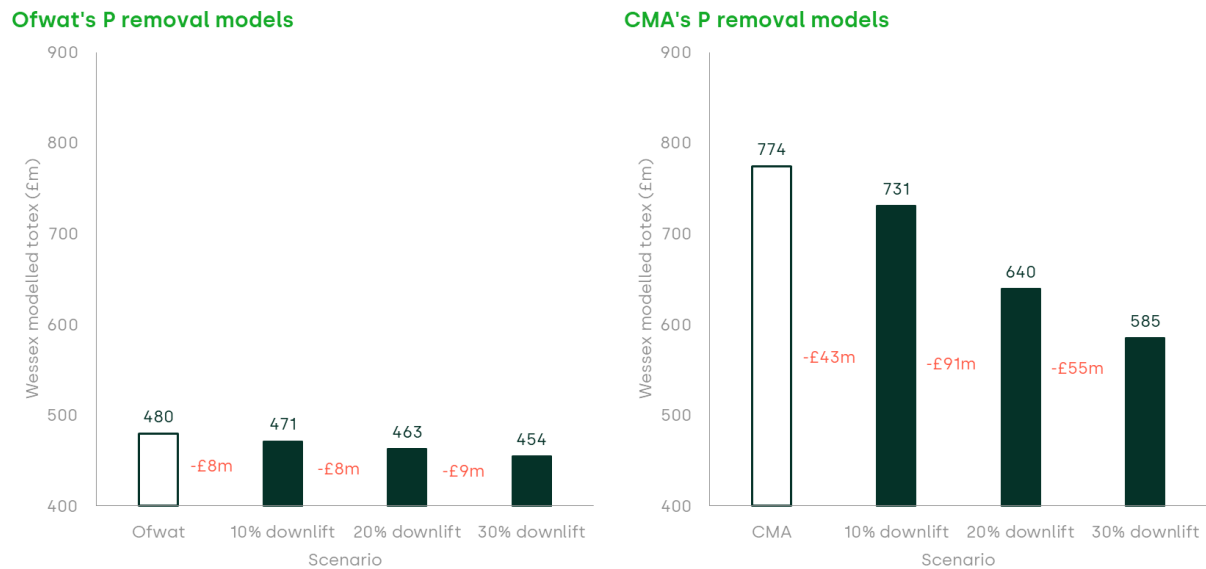


Source: Oxera analysis (See Annex 10 (Datapack Chapter D supporting analysis)).

(321) Figure 12 below sets out an alternative illustration of the same sensitivity of the CMA approach to the cost requests of a specific company. This shows the impact on Wessex's allowed P-removal costs, had it reduced its requested costs in 10% increments. As previously, no other changes are made to the costs submitted by other companies or the underlying explanatory variables. As in the previous figure, it can be seen that allowed costs are relatively less sensitive to company's requests within Ofwat's framework but are highly sensitive to company's requests within the CMA's framework. Therefore, the incentive by a company to request allowances

based on stringent efficiency targets is severely diminished in the CMA new and untested modelling approach.

Figure 12: Alternative illustration of same sensitivity of the CMA’s modelled allowances to the cost requests of a specific company

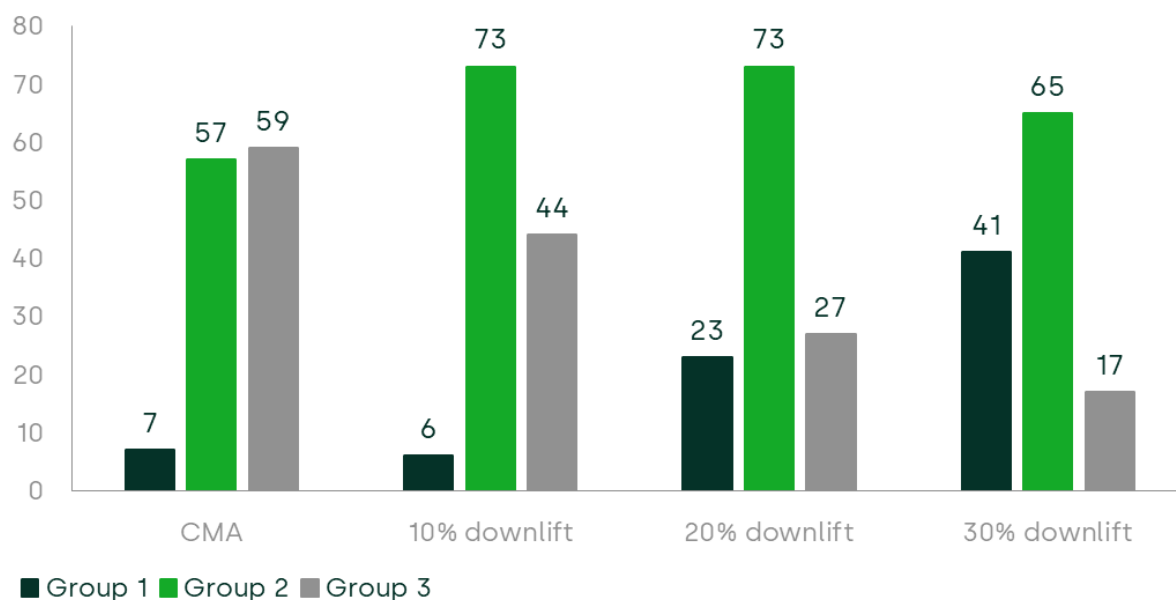


Source: Oxera analysis (See Annex 10 (Datapack Chapter D supporting analysis)).

(322) This sensitivity is primarily driven by the re-allocation of individual schemes to what the CMA calls different ‘technology’ groups. Figure 13 below shows how the allocation of Wessex Water’s schemes to different groups changes within the CMA’s methodology with relatively small changes to request costs. It can be seen that the identification of individual schemes with specific technologies are highly sensitive to the cost of the scheme, rather than other explanatory variables.

Figure 13: Allocation of Wessex Water's schemes to different groups changes within the CMA's methodology

Group allocation impacts (CMA models)



Source: Oxera analysis (See Annex 10 (Datapack Chapter D supporting analysis)).

(323) This methodology rewards inefficient companies and penalises those like Anglian which sought to remove cost during business plan development.

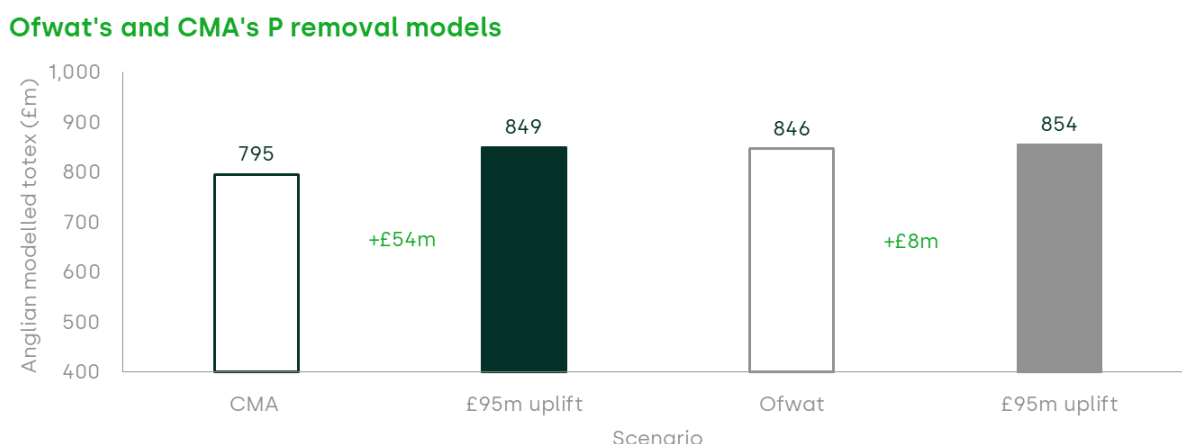
(324) For example, one of Anglian's self-imposed cost challenges for P-removal was achieved by reducing the costs of interstage pumping stations, inlet works, and Mecana filter tanks through comparisons with similar projects,⁸⁰ accordingly reducing its request by £73m. Had Anglian's originally submitted Business Plan costs not reflected this self-imposed cost efficiency challenge, under the CMAs P-removal approach it would have received a greater allowance.

(325) Based on the latest position of the P-removal schemes to be delivered in AMP8, adding back Anglian's self-imposed cost challenge would increase

⁸⁰ Anglian Water, PR24 Enhancement Strategies Part 2: Work with others to achieve significant improvements in ecological equality of catchments (October 2023), section 3.3.2, page 51 (See [here](#)).

Anglian's allowance using the CMA model by at least £55m.⁸¹ This goes to show that the new modelling approach used by the CMA is incapable of isolating efficient P-removal costs. Not only does this fail to achieve the purpose of benchmarking, were such an approach to have been adopted it would have also affected company incentive. Anglian would have had the incentive of increasing its requested costs at BP stage, instead of pushing harder for efficiencies to the benefit of customers. This is a clear disincentive for companies to do the right thing for customers and submit efficient costs before they are assessed by the regulator.

Figure 14: Anglian's modelled allowances under the CMA's and Ofwat's models



Source: Oxera analysis (See Annex 10 (Datapack Chapter D supporting analysis)).

The CMA's approach lacks engineering rationale for model grouping assignments

(326) Despite similar engineering parameters, some schemes receive notably different allowances. This is primarily due underlying differences in requested totex and how this effects their position within the CMA's prescribed grouping. When comparing schemes there is no engineering

⁸¹ Since the original business plan submission, some schemes have been removed and others added. In this analysis, Anglian has only considered those schemes which are still in the plan, which cover £73m of this £95m cost challenge.

basis why some are categorised into Group 2 while others fall into Group 3, as the distinguishing characteristics (aside from cost) are not evident.

(327) An example of two schemes which have similar scope requirements in terms of flow and P-removal consents are shown in the Table 9 below:

Table 9 Comparison of schemes with similar scope requirements

Site	Company	CMA grouping	PE	Permit limit	Company requested allowance	CMA modelled allowance
Buckingham STW	ANH	2	19,793	0.25 mg/l	£4.66m	£4.9m
Wells	WSX	3	18,941	0.25 mg/l	£17.47m	£11.6m

(328) Absent any engineering rationale for why the Wells scheme should cost more than the Buckingham scheme, the CMA's approach simply categorises Wells in group 3 (thereby attracting a higher allowance) simply by virtue of the requested totex being higher. With no engineering rationale behind the difference in cost allowance, the model is simply allowing inefficient costs and adding further efficiency challenges to efficient schemes. A better approach would treat these schemes equally regardless of the requested totex, and differentiate allowances based only on sound engineering rationale.

2.2 Differences in proposed technological solutions at initial scheme development act as a major driver of cost inefficiency

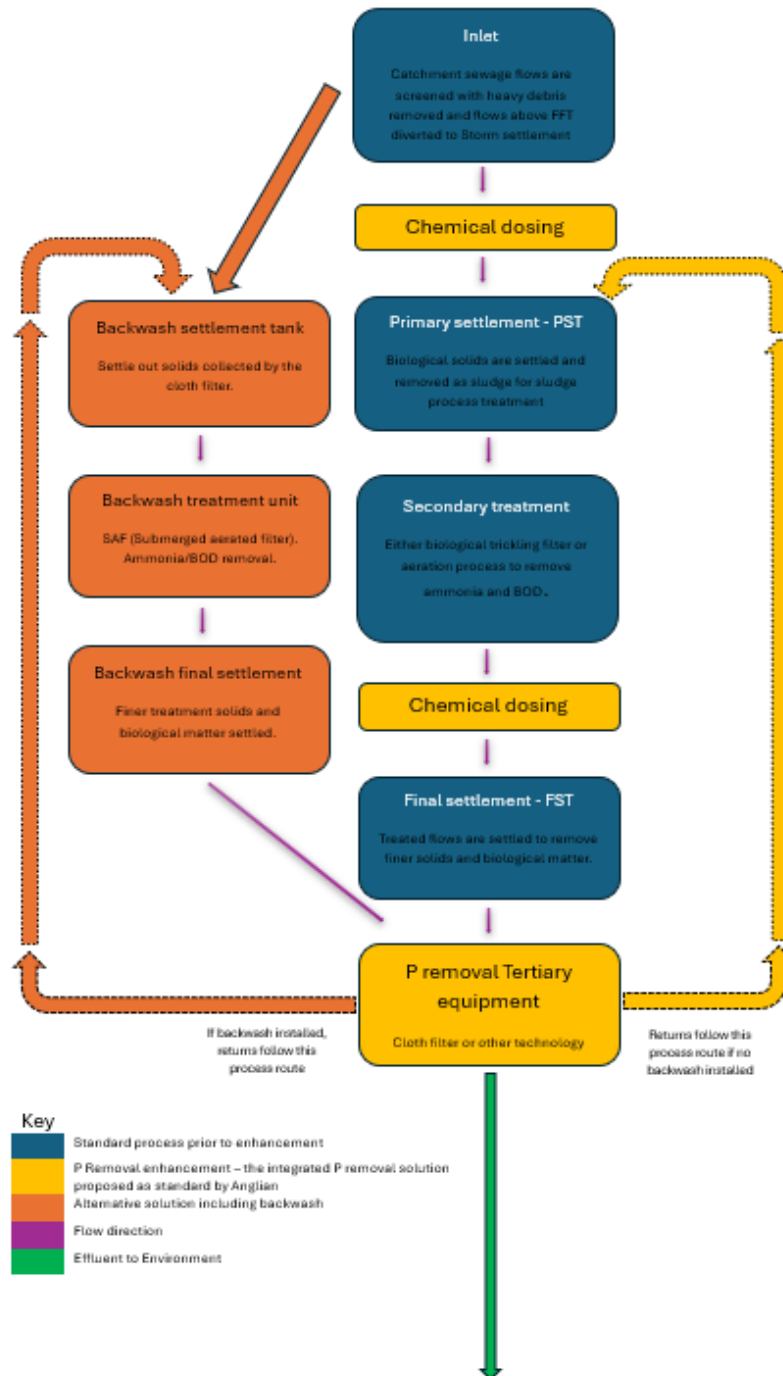
(329) The issue above is not a theoretical one. Although meeting consent limits is legally binding, companies still have discretion over the solution and costs they propose to meet P-removal requirements (i.e. there is not a fixed solution for a given level of P-removal, site configuration etc). These choices are management decisions influenced by operational experience, efficiency culture, supply chain engagement and regulatory strategy. They are within company control and have a significant impact upon the requested costs, particularly when multiplied over hundreds of P-removal schemes. Technology choices companies make in the initial scheme design stage can be a major driver of cost inefficiency when schemes are overscoped relative to comparatively efficient schemes.

- (330) The CMA states that its new modelling approach “allows for the possibility that there may be different technologies and unobserved cost drivers for p-removal schemes” (PDs, ¶5.39). But if those differences arise from management choices (which may or may not be efficient) then the CMA’s approach does not control for exogenous factors, but embeds inefficiency into allowances, and assumes inefficiency in other efficient schemes. This is a significant flaw in the premise for changing Ofwat’s Final Determination and adopting the CMA’s revised methodology.
- (331) The assumptions companies make when developing their P-removal programmes can significantly affect the selected solutions for comparable sites between companies, especially when applied across many schemes. Since these assumptions are at the discretion of management, each company is free to choose its own approach. As a result, different companies may address P-removal differently and reach varying conclusions, even for identical sites. Regulatory allowances must look past these different approaches which are under management control and treat identical schemes equivalently.
- (332) For example, one way that Anglian has developed efficient costs is through the treatment of backwash flows from the P-removal treatment process. Anglian designs its AMP8 phosphorus (P) schemes assuming that sites include a built-in flow rate buffer – about 10% of the Pass Forward Flow. This buffer is usually used by site drainage and existing processes like humus tank returns and backwashing. Based on experience from AMP7, Anglian expects this buffer isn’t always fully used at all times, so it can handle extra flows from Pile Cloth Filter treatment without needing new infrastructure. backwash side stream system to increase this flow rate buffer.⁸²
- (333) The following schematic sets out the technologies required for P-removal. Blue boxes, such as for the inlet, set out the standard process prior to enhancement, with yellow setting out Anglian’s proposed standard P-

⁸² For example, see Wessex Water Statement of Case, page 245 (See [here](#)).

removal technical interventions. The optional additional sidestream process is set to the left-hand side using the orange key.

Figure 15: Technologies Required for P-Removal Process



(334) The proposed design choices have a major impact on the total costs proposed by companies depending on whether an additional separate sidestream system is considered necessary. For instance, using Brackley Water Recycling Centre (WRC) (Population equivalent (P.E.) 47,780) as

an example, Anglian's projected costs based on using existing hydraulic capacity for chemical dosing, treatment of tertiary solids, and sludge handling, is £4.537m. Including an additional sidestream process for backwash flows, would increase the overall costs to a total of £7.823m (+72%). Likewise, for Fornham All Saints WRC (P.E. 87,270) serving Bury St Edmunds, using existing hydraulic capacity the requested expenditure allowance is £12.617m, in contrast to a revised potential cost of £18.076m (+43%) with sidestream process for backwash flows.

- (335) When multiplied across hundreds of schemes, these management-driven choices fundamentally alter requested costs for a given level of P-removal requirement. Anglian has taken all reasonable steps to ensure optioneering has identified the most cost-efficient solution types whilst meeting the required need. Without understanding whether additional scope (such as backwash side streams) is truly required for each site, the CMAs approach risks setting higher allowances for companies which have put in a higher scope by default rather than seeking the most cost-efficient way to deliver a P-removal scheme.
- (336) Given the impact that such decisions can have in building the costs of solutions, Anglian considers that such factors can explain why efficiency challenges in the region of 30% can be seen for some companies, and Ofwat's cost model relatively low r-squared values – because it does not simply seek to replicate companies requested costs. This is not a flaw in the Ofwat model, it reflects the reality that management choices can have a significant impact on the efficiency of P-removal schemes. Reversing this approach, as the CMA's approach does, encourages companies to overscope and plan for assets that another company would consider adds unnecessary costs for customers.
- (337) Indeed, the CMA's own analysis provides evidence for this. In table E.3. of volume 5 of the PDs, the CMA sets out the results of, in its words a "simple regression analysis to test the hypothesis that companies have a common view of the effect of expected increases in input cost over 2025-30 on the totex needed to implement AMP8 p-removal schemes" (PDs, ¶E22). This

analysis tests whether companies have a common view on the cost increase required to deliver P-removal schemes over AMP8, or whether there are statistically-significant differences between companies in the level of cost increase being requested at AMP8. The CMA's analysis, which controls for the relevant exogenous variables for delivering P-removal schemes (P.E, the new consent level and the historical consent level), rejects the hypothesis that "companies have a common view on the average expected totex increase in AMP7", instead finding statistically significant differences between some companies.

(338) The PD draws the following conclusion from this analysis: "[t]his provides statistical support for the possibility that there may be considerable uncertainty about the magnitude of these cost pressures across the sector, and different approaches to reflecting these cost pressures in cost forecasts." The statistically significant finding that some companies, including Wessex, predict structurally higher P-removal costs is evidence for the position explained above, some companies could have structurally over scoped their P-removal programme over AMP8 using materially different design assumptions for solutions which are within management control.

(339) The CMA's PDs cite its model's higher r-squared value as a reason for it being an improvement on Ofwat's model, but without these assumptions on solution type and scheme design which are within company control being accounted for, it would be expected that a good model could have a low r-squared value. A model simply giving every company exactly what it requested would have an r-squared of 1.

2.3 Concerns with CMA's model specifications

(340) Anglian also has significant concerns with the variables that the CMA has included in its model and its rationale for doing so. The use of a company-level density variable is particularly problematic. While the rationale – that urban sites cost more due to land constraints – may be valid at some sites, this must necessitate assessing density at a site-level, not a company level. Moreover, density at a site level is already captured by the existing

‘population equivalent’ variable (sites with lower p.e. serve smaller, rural catchments with low density, whilst sites with higher p.e. serve larger, urban catchments with higher density). Applying company-level density on top of this risks funding inefficiency, if the more urban companies happen to be less efficient at delivering P-removal schemes (which is possible given the small number of companies (10)).

- (341) Anglian also strongly disputes the use of the “wages” variable. The negative coefficient (suggesting higher wages lead to lower efficient costs) is counterintuitive and reflects co-linearities that are not understood. The CMA acknowledges that this variable has a ‘counter intuitive sign’ and presents analysis to suggest that this is attributable to multicollinearity. Without clarity on these co-linearities, the model risks reinforcing inefficiencies by granting higher allowances to companies with less efficient delivery, while placing greater pressure on those operating efficiently
- (342) The key scale variable in the P-removal models is the level of population equivalent (PE) served.⁸³ There is industry consensus that the larger the scheme, the greater the associated cost. However, the models estimated by the CMA for group 1 identify a *negative* relationship between costs and scheme size. This implies that for this group of schemes, the larger a scheme is, the lower its cost. This is completely contrary to the operational and engineering relationship between scheme size and cost.
- (343) A key treatment complexity variable in the P-removal models is the extent to which the exogenous requirement represents a tightening relative to the historical phosphorus permit for the site.⁸⁴ However, the CMA’s model for group 3 finds this variable to be statistically insignificant and effectively 0. It is unclear what ‘technology’ that the PD is seeking to isolate using its

⁸³ As PE served serves as a proxy for the load to be treated at a site, and the higher the load, the more phosphorus in the used water that needs to be removed via treatment, and the greater the scope requirements of the P-removal scheme.

⁸⁴ The tighter the P-removal consent, the lower the amount of phosphorus allowed in the effluent, and therefore the more phosphorus that must be treated at the water recycling centre, and the larger the scope of the required scheme.

approach could legitimately render the historical level of consent irrelevant for the costs of meeting a new consent.

(344) The inclusion of density and wage variables risk the model seeking to maximise the relationship between requested costs and allowed costs, whilst actually permitting an approach which encourages the submission of inefficient costs. The models resulting from the PD GMR procedure produces nonsensical results between scheme scale and the change in the level of treatment complexity that contradict operational and engineering rationale.

2.4 Anglian's requests of the CMA on P-removal for Final Redetermination

(345) With these points in mind, Anglian requests that the CMA revert to a modified version of Ofwat's Final Determination models, allowing for engineering deep dives to address specific issues raised by companies through their statement of cases. This approach would better reflect the engineering rationale behind P-removal schemes and treats companies on a more level-playing field in setting P-removal allowances. By setting allowances based on cost drivers rather than requested costs, it avoids the issues that the CMA's model faces of circularity, counter-intuitive variable inclusion and incentives to submit inefficient costs.

3 Proposed gated allowance for Cambridge Water Recycling Centre

(346) Anglian is engaging with the CMA on Cambridge water Recycling Centre ("**WRC**") in response to a significant change in national policy that has materially altered the investment needs at the site. In August 2025 the government confirmed it would no longer fund the relocation of Cambridge WRC through the Housing Infrastructure Fund ("**HIF**"). This decision has triggered the need for a fundamentally different investment approach at the existing site, which had previously expected to be decommissioned in the early 2030s.

(347) The change comes at a time when government growth ambitions for the region are intensifying, with a clear expectation that the water sector will enable accelerated housing and economic development. Cambridge is

central to these ambitions. The government has reaffirmed that the Oxford-Cambridge corridor, including Greater Cambridge, remains a national economic priority, with a Ministerial Statement in October 2025 announcing a centrally led development corporation and up to £400 million in initial infrastructure funding.

(348) Cambridge WRC is one of Anglian's largest Water Recycling Centres, serving the city of Cambridge as well as surrounding villages in South Cambridgeshire, with a total population equivalent of over 200,000. It underpins growth in one of the UK's fastest growing urban centres and central to many of the government's growth ambitions.

(349) The government has made forging the Oxford-Cambridge "supercluster" a key national priority, with plans to unlock £78bn of growth in the corridor by 2035.⁸⁵ Failure to secure timely funding for the required investment at Cambridge water Recycling Centre risks undermining the government's flagship growth agenda.

(350) Anglian therefore requests the introduction of a gated allowance process for Cambridge Water Recycling Centre. This proposal has been brought forward at this stage in the process because it has been triggered by a change in a national policy to reverse the decision to relocate Cambridge Water Recycling Centre. This policy shift has introduced additional cost and uncertainty. This policy decision was announced in August 2025, and Anglian has been working through the implications of this and potential solutions with Ofwat and government departments.

3.1 Background to the Cambridge Waste Water Treatment Plant Relocation Project (the 'Relocation Project')

(351) The Relocation Project was designed to move Anglian Water's existing wastewater treatment works from Cowley Road in north-east Cambridge to a new site between Horningsea, Fen Ditton and Stow Cum Quy, just north of the A14.

⁸⁵ HM Treasury and The Rt Hon Rachel Reeves MP, Reeves: I am going further and faster to kick start the economy (29 January 2025), (See [here](#)).

- (352) This project began in 2018, with the proposal to move the existing WRC as part of the Cambridge Northern Fringe regeneration plans. The need for the project stemmed from the strategic aim to unlock the current site for redevelopment as part of the proposed Northeast Cambridge urban district. The WRC occupies one of the last major brownfield sites in Cambridge and relocating it was central to the construction of circa 8,000 new homes, employment space and supporting infrastructure.
- (353) The WRC did not require a relocation due to any operational driver. The relocation was planned based on economic and planning grounds – to facilitate growth, regeneration and more sustainable use of land close to key transport links such as the recently built Cambridge North train station.
- (354) As such, the Relocation Project was to be funded primarily through the Government's HIF with Homes England managing the funding agreement (rather than the relocation being funded by Anglian Water customers and/or shareholders). Anglian Water led the project's design and planning process. HIF support for the relocation was announced in March 2019.
- (355) Anglian carried out site selection studies between 2019 and 2021, with further consultation and technical assessments at the proposed site between 2021 and 2022. Anglian submitted a Development Consent Order (DCO) application in 2023 and the Secretary of State granted development consent on 8 April 2025.
- (356) On 15 August 2025 the Ministry of Housing, Communities and Local government confirmed that it would no longer provide the HIF grant for the relocation project, citing that escalation in the costs of the project made the scheme unaffordable.

3.2 Impact on the investment needs at Cambridge WRC

- (357) The decision to cancel the funding for the relocation project is a significant factor impacting upon the investment needs of the existing site. Until recent months, investment at the site had been progressing under the working assumption that the WRC would be relocated. For example, the growth allowance request by Anglian at PR24 was not to expand the capacity at

the existing site but was to be a contribution toward the costs of establishing the appropriate sizing of the new relocated site. The same is true for other related enhancement investments such as IED and P-removal at the site. Building this enhancement at the existing site, when the site was due for decommissioning in the early 2030s would not have been a good use of customers' money and may have resulted in customers paying twice were investment repeated at both the existing and relocated site. The same applies in relation to capital maintenance investments in this period, with shorter term maintenance solutions providing better value than higher cost long-term capital maintenance solutions given the short time before the site would be decommissioned.

- (358) Anglian now faces a need to develop materially different solutions at the site and take a significantly different approach to capital maintenance than it did before the withdrawal of funding from Homes England for the relocation of the site.
- (359) Anglian is working very closely with third parties including Government and regulators, to ensure that it can support the growth in the region, particularly through a dedicated Ministerial Water Delivery Taskforce.
- (360) What remains particularly uncertain is the funding available to support the necessary growth and maintenance of the site, given the materially different approach now required for enhancement and maintenance at the site in light of very different assumptions on the sites' future in AMP7. The growth requirements and the environmental obligations at the site continue to evolve, and as a result, the full investment needs are not yet defined. The funding route for securing additional allowances is also unclear. While Ofwat has proposed including growth in the cost change process, this mechanism is still under consultation and, as currently framed, offers no certainty on cost recover until late 2027, and no actual cost recovery until 2030.
- (361) Anglian has discussed this issue directly with Ofwat, who acknowledge the urgency of enabling growth at the site. Both parties agree that, given the time-sensitive nature of the investment, the most pragmatic and expedient

route to secure the necessary funding is via the CMA redetermination. Anglian is therefore aligned with Ofwat in seeking resolution through this process to ensure timely delivery of essential infrastructure.

3.3 Anglian's proposed solution

- (362) One action of the Water Delivery Taskforce is to identify a suitable funding mechanism for the additional requirements at Cambridge Water Recycling Centre.
- (363) In light of both a) the need for a route to recover additional costs for Cambridge WRC and b) the current uncertainty of the investment required at the site, Anglian considers that an adjustment to the PR24 Final Determination to allow costs through the PR24 gated process would suitably reflect the significant cost uncertainty at the site, whilst ensuring that Anglian can have confidence in suitable cost recovery of growth investment at the site. Anglian recognises that it received enhancement allowances in Ofwat's FD. The gated process would allow it to recover only those costs which are over and above the allowances which were already set in the FD.
- (364) Anglian considers that the Cambridge WRC scheme meets the requirements to be considered for a gated allowance namely:
- (i) The expected cost of the works required at the site as a result of the relocation exceeds £100m. Anglian's current cost estimates for the site beyond the FD allowance is £135-£200m. Note that these are currently best estimates, with firm costs expected to be better understood during the AMP when further details such as the growth expectations of the catchment are better understood, and these would be set out as part of the gated process.
 - (ii) The change in circumstances (as revealed in August 2025) at Cambridge could not have been taken into account when setting PR24 allowances. As highlighted above, the development and cancellation of the relocation scheme have led – due to factors outside of Anglian's control – to investment assumptions being made

in AMP7 and at PR24 which were considered to be the best value options at the time but are insufficient to support the ongoing use of the site. Ofwat has also recognised that the timing of and detail of the cost change process will be less suitable for addressing this challenge for two reasons. Firstly, the urgency of the need to ensure growth in Cambridge is facilitated means this request is better suited to the open redetermination process rather than Ofwat's future cost change process which remains subject to confirmation. Secondly, as currently proposed by Ofwat, the cost change process does not cover the full growth challenges faced at the Cambridge site, nor is the proposed process sufficient to cover the cost uncertainty around the broader full requirements of the site (e.g. nutrient removal, IED and capital maintenance).

- (iii) This change is driven by a reversal of a policy decision that had been in place since 2018 to move the water recycling centre to a new location. The planned relocation was on the basis of housing need rather than any water / environmental need. The decision to reverse this policy was outside of company control and results in a situation where the costs for enabling growth in Cambridge is now in scope at a level beyond that which was previously assumed.
- (iv) There remains considerable uncertainty, as Anglian continues to work closely with MHCLG on future expected growth in Cambridge which the site must accommodate and with the EA to confirm the required nutrient consent levels at the site. At present, these requirements are both new and uncertain.
- (v) Given the current uncertainty, developing a firm, developed view of costs is not possible at this stage. It would be more suitable for Ofwat to assess the costs required at the site during the AMP through the gated process.

(365) Anglian therefore seeks the CMA's support for the additional costs at Cambridge WRC within a gated process, recognising the continued

uncertainty around the site's future requirements. This is a strategically critical site for both regional and national growth, directly supporting the government's economic and housing ambitions in the Cambridge-Milton Keynes-Oxford arc and the broader East of England growth agenda.⁸⁶

(366) The reversal of the relocation policy has had a direct and material impact across multiple cost areas, all of which must be considered within the gated process. Importantly there would be no immediate impact on customer bills until investment needs are confirmed, and allowances finalised. Whilst the impact on bills would be low, the consequences of underinvestment would be significant, risking delays to housing deliver, economic growth, and environmental outcomes in one of the UK's most economically vital regions. Anglian therefore urges the CMA to support this approach which is aligned with Ofwat recognition of the urgency and strategic importance of enabling growth at Cambridge WRC.

4 Growth at Sewage Treatment Works

(367) Since submitting its Statement of Case, Anglian has faced escalating cost pressures in delivering the investment required to support growth at Water Recycling Centres (Sewage Treatment Works). These pressures are driven by a combination of evolving external factors, including national policy ambitions, regional development dynamics, and tightening regulatory expectations:

(368) Government growth ambitions have intensified, with a clear expectation that the water sector will enable accelerated housing and economic development. This disproportionately affects Anglian's region, which includes Greater Cambridge, the Oxford-Cambridge Arc, and the proposed Universal theme park in Bedford.⁸⁷ The scale of growth in these areas is creating a widening gap between regulatory allowances and infrastructure

⁸⁶ See for example <https://www.gov.uk/government/publications/oxford-cambridge-growth-corridor-investment-prospectus> and <https://www.gov.uk/government/publications/greater-cambridge-growth-scenarios/greater-cambridge-growth-scenarios#scenario-results>.

⁸⁷ See <https://www.bbc.co.uk/news/articles/cz95n2837vgo>

needs. Without timely funding, water infrastructure risks becoming a blocker to nationally significant development.

- (i) Environmental and regulatory requirements have evolved, with additional expectations placed on growth schemes that exceed those assumed in Anglian's business plan. These changes are materially increasing the cost of delivering growth.
- (ii) Updated local development plans and government-led housing targets have introduced additional growth scope beyond original forecasts. This is compounding investment needs and associated cost pressures.

(369) In its SoC, Anglian did not raise representations on its Growth enhancement allowances, as the original scope was considered acceptable at the time. However, in light of the material and externally driven changes outlined above, Anglian now considers that the allowances are insufficient to support delivery of the level of growth expected to be enabled during the period to 2030.

(370) It is important to note that the request Anglian is making to the CMA do not seek to address all of the growth cost challenges it faces. Anglian is facing cost challenges across its Water Recycling Centre portfolio and also demands on the clean water side of the business. The requests set out below are targeted at some of the most pressing issues and where the CMA has evidence readily available to implement these changes within the redetermination window.

(371) Anglian requests that the CMA consider these emerging cost pressures and the proposed solutions below, which are best addressed through the redetermination process. These solutions are proportionate, time-sensitive, and capable of implementation within the remaining redetermination window.

4.1 Interaction with existing processes

(372) Anglian notes that Ofwat has signalled that growth expenditure is now in scope of the PR24 cost change process under consultation. This process

would allow for additional allowances where companies can evidence new growth requirements. In principle, Anglian welcomes the inclusion of growth within the scope of the cost change process. However, the proposed coverage is insufficient as it does not address the additional expenditure pressures arising from the level of growth already assumed in the FD. Moreover, the timeline for this process (with decisions not expected until late 2027, and funding not made available until 2030) exacerbates the equity challenge and creates prolonged uncertainty around revenue availability. This is particularly acute in areas like Cambridge, where national government ambitions for accelerated development are most pronounced.

(373) Without timely and adequate funding, Anglian will be unable to commit to or deliver essential infrastructure to support housing and economic growth. Failure to act swiftly risks undermining government objectives and could trigger mounting pressure from central and local government, who expect the water sector to enable development at pace. It also exposes Anglian to reputational and regulatory risks, and potential environmental non-compliance if growth proceeds without the necessary wastewater infrastructure in place.

4.2 Requests to the CMA

(374) Anglian makes four specific requests for additional allowances for Growth at STWs. Each request is targeted, evidence-based, and capable of expedient implementation without requiring remodelling or deep-dive analysis by the CMA:

- (i) Reversal of the under-delivery clawback applied by Ofwat in the Final Determination (+£45m allowance).
- (ii) Reversal of the DWF compliance adjustment applied in the Final Determination (+£25m allowance).
- (iii) Inclusion of modelled allowances for Bedford and Whitlingham Water Recycling Centres, including an allowance for the full Bedford scheme (+£57m allowance).

- (iv) A two-sided PCD to allow recovery of costs associated with growth beyond the original business plan forecasts, while maintaining accountability. Alternatively, revised upfront allowances to reflect updated growth forecasts (estimated at £77m).⁸⁸

(375) Taken together, these allowances would result in a bill impact of approximately 0.53% (£2.60 on the annual average bill) by the end of AMP8.⁸⁹ This investment is essential to unlocking government growth objectives across Anglian's region.

The rationale for each request is set out in the following sections.

4.2.1 Reversal of under-delivery clawback

(376) In its provisional findings, Ofwat removed under-delivery clawbacks on base cost adjustments. It also applied this to Northumbrian Water's growth at STWs allowances. Applying this approach consistently across companies is essential to ensure regulatory fairness and parity. Removing the application of this under-delivery clawback to Anglian Water, would increase its allowance by £45m.

(377) Anglian did not previously challenge the under-delivery adjustment, as it considered the overall Growth allowance at STWs to be acceptable at the time. However, in light of the additional pressures outlined above (which have emerged since the Statement of Case) Anglian now considers the total enhancement allowance for Growth at STWs to be insufficient. The under-delivery clawback is a material component of this shortfall and warrants reconsideration.

(378) Anglian supports the CMA's PDs view of this under delivery clawback. For Growth at STWs, this clawback has been applied to an assumed level of growth allowances (based on company requested costs, rather than an actual allowance for specific schemes) from base allowances. This approach should recognise that the relevant allowances are set at a

⁸⁸ £31.3m of this relates to updated growth forecasts for Whitlingham and Bedford. £45.6m relates to updated growth forecasts for sites with a modelled allowance.

⁸⁹ Difference in 2029/30 bill when the additional totex requested here is spread over years 2-5 of the price control.

broader level than this, and Anglian has overspent its PR19 base allowances.

(379) Anglian's Past Delivery adjustment was £45.05m. In line with the CMA's reasoning in paragraph 5.345 of the enhancement chapter, Anglian requests that this adjustment be removed. This would appropriately increase its Growth at Sewage Treatment Works allowance by £45.05m, reflecting a fair and consistent application of the CMA's provisional methodology.

4.2.2 Reversal of DWF compliance adjustment

(380) In addition to the under-delivery adjustment, Ofwat also applied a DWF compliance adjustment in its FD Growth at Sewage Treatment Works allowances. For Anglian, this resulted in the removal of allowances for schemes which a) failed the 'three-in-five' rule against the DWF permit at the site and b) Expected DWF capacity at the site after the completion of the growth scheme would be insufficient to meet the DWF permit. Applying this adjustment removed growth enhancement allowances in their entirety at seven sites (with a cost allowance removal of £25m).

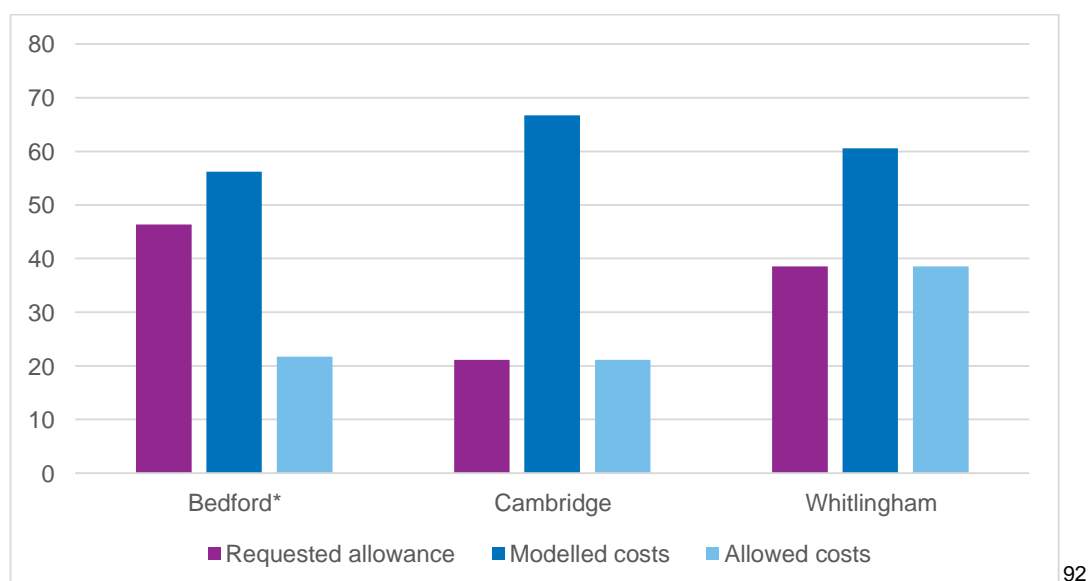
(381) This adjustment conflates the issues of permit compliance and growth capacity. Anglian recognises the need to bring these sites up to compliance and it does not seek additional allowances to do so where non-compliance is due to factors other than growth. However, not allowing any allowance to deliver the additional capacity required at these sites as a result of growth in the catchment only serves to place additional growth pressure (a cost area which is specifically covered by enhancement allowances at PR24 - on base allowances) where the PDs already apply additional cost pressure. For these sites, Anglian does not request enhancement allowances which would deliver full DWF compliance, as it recognises that some of this is due to other factors (e.g. infiltration into the network).

(382) Anglian requests that the CMA reinstate the growth allowance for these seven sites, providing an additional £25.15m to its growth allowances.⁹⁰

4.2.3 Modelled allowances for large growth schemes

(383) At the FD, Ofwat made adjustments to three of Anglian's growth schemes (Cambridge, Whitlingham (Norwich), Bedford) which resulted in the FD allowances being £102.2m lower than the efficient modelled allowance.⁹¹ This occurred because Anglian's expected costs set out in its business plan were lower than the Ofwat modelled allowance. As a result of Ofwat's mechanical deep-dive process allowances were capped at the submitted values, with no weight given to Ofwat's modelled outcome.

Figure 16: Modelled Allowances for Large Growth Schemes



(384) Since the FD, additional cost pressures have emerged across Anglian's Water Recycling Centres, driven by evolving environmental obligations and accelerating growth demands. While these pressures are felt across the region, they are particularly acute at three strategically important sites

⁹⁰ Ofwat, FD CA83 Growth at sewage treatment works enhancement expenditure model (February 2025), DWF compliance tab (cell. AN6) (See [here](#)).

⁹¹ Comparing the modelled cost for these schemes in CA38, 'Modelled costs' tab (triangulated modelled costs column J) of £56.152m (Bedford); £66.718m (Cambridge) and £60.638m (Whitlingham) against the allowances (column AE 'triangulated') of £21.763m (after AMP9 adjustment, £21,142m, £38.460m respectively).

⁹² Note that the requested allowance at Bedford included the full costs of the scheme which spread over AMP8 and AMP9. The modelled costs were set on a whole scheme (2 AMP) basis. The final allowance was only granted for the AMP8 portion of the scheme. Figures taken from 'Modelled costs' tab of the FD growth model.

serving large populations: Cambridge, Bedford and Whitlingham (Norwich). At Bedford, for example, growth linked to the proposed Universal theme park - expected to open in 2031 and create 8,000 permanent jobs – driving the need for earlier investment in AMP8. However, the FD split growth allowances at the site across AMP8 and AMP9 without a mechanism to bring the AMP9 allowance forward, leaving no flexibility to respond to faster-than-expected growth.

(385) In addition, the increased volumes of wastewater expected at Bedford mean that phosphorus concentrations in the treated effluent must be even lower to ensure the same total amount of phosphorus enters the river. Achieving this at Bedford alone would require going beyond the technically achievable limit for phosphorus removal. As a result, additional phosphorus removal activity is now needed upstream of Bedford to meet environmental standards while supporting growth, adding over £10m in unfunded nutrient removal requirements at other WRCs. These sites exemplify a broader challenge across Anglian's region (with faster growth across the whole region, rather than higher growth in one region being balanced by lower growth elsewhere).

(386) The Table 10 below set out Anglian's latest view of growth costs at each of these three sites to deliver the capacity required in the FD. Anglian currently estimates that the costs of delivering these three schemes alone will exceed the FD allowance by over £160m. Without a means to remedy this funding gap, it will not be possible for these sites to support growth in the strategically important catchments that they cover.

Table 10 Growth Allowances and Cost Estimates for Large Growth Schemes

Site	FD growth allowance (£m)	Updated cost estimate
Bedford	21.8	97.9

Cambridge	21.1	68.6 ⁹³
Whitlingham	38.4	77.1

(387) Given the growth needs now emerging across these sites, and latest view of costs for delivering growth investments, Anglian requests that the allowance that would be granted through the industry benchmarking model is reinstated. This would treat these schemes on a par with other schemes in the FD modelling approach. This additional allowance is unrelated to changing growth forecasts and so does not overlap with Anglian's other requested allowance on growth.

(388) This is a straightforward and justified change. All three locations (Cambridge, Norwich, and Bedford) are areas of strategic national importance to the government's growth agenda. Cambridge is central to the Oxford-Cambridge supercluster, Norwich is a designated growth node in the East of England with active government support for housing and innovation, and Bedford sits within the corridor targeted for accelerated infrastructure delivery (and will be home to the new Universal theme park). The government has made clear its intention to unlock housing and economic development in these areas, including through centrally led development corporations and targeted investment.

(389) Reflecting the modelled allowance aligns with these national priorities and ensures the regulatory framework supports the delivery of critical infrastructure in a way which is consistent with the way such allowances are for other companies. Failure to do so risks undermining government ambitions, delaying housing and employment growth, and placing unnecessary strain on local authorities and developers who rely on timely water infrastructure to proceed.

⁹³ Note that this is the estimated figure based on the growth forecasts as per the FD, which are subject to change based on the broader situation at Cambridge WRC as highlighted in Anglian's submission on gated allowances. Anglian propose to address the additional growth requirements at Cambridge through the Cambridge Gated allowance.

- (390) Anglian is not requesting to recover its full cost estimate through the CMA redetermination. It recognises that the modelled costs are the existing benchmark for efficient costs across the industry (with adjustment for outliers). To support this process, it is only seeking to recover the efficient modelled allowances as set out in Ofwat's Final Determination, it does not seek a deep-dive of allowances as other companies have had when their large schemes have costs which are greater than the modelled allowance.
- (391) Given the uncertainty associated with the requirements at Cambridge WRC, Anglian's preferred solution is for the allowance at this site to be addressed through the gated process set out in 'Proposed Gated Allowance for Cambridge Water Recycling Centre' above. If the CMA does not support the gated approach, Anglian requests that Cambridge WRC is included in the upfront allowance adjustment as per Bedford and Whitlingham.

Table 11 Requested Allowances for Large Growth Schemes

	Cost impact (£m)	Comments
Bedford (Bring forward AMP9 allowances)	24.6	Increase from £21.763m to £46.402m
Bedford modelled allowance	9.8	Increase from £46.402m to £56.152m
Whitlingham modelled allowance	22.2	Increase from £38.46m to £60.638m
Cambridge modelled allowance	0/ 45.1*	*Only required if Gated allowance approach not supported. Increase from £21.142m to £66.178m
Total	56.6/ 101.7*	*56.6m if gated approach at Cambridge is allowed.

- (392) The overall totex request for the three growth areas highlighted above are summarised in the Table 12 below.

Table 12 Totex Requests for Large Growth Schemes

Growth area	Additional allowance (£m)	Commentary
1.Under-delivery adjustment reversal	45	
2.DWF compliance adjustment reversal	25	
3. Modelled allowances for Bedford, and Whitlingham	57	Additional £45m required for Cambridge if no gated approach allowed.
Total	127*	*£172m if £45m additional allowance for Cambridge

(393) Note that these allowances (and the gated allowance for Cambridge) would not close the entire totex gap that Anglian has across its across its enhancement growth schemes. Anglian has sought allowances here to only seek additional upfront allowances on growth where the solution is readily available and the CMA can have confidence that the relevant allowances are efficient.

4.2.4 Addressing uncertainty of additional growth

(394) The totex changes above would help to allow Anglian a baseline level of totex to deliver its existing WRC growth programme. However, as highlighted in Anglian's previous submissions (see ANH Response to SoCs, page 4 ([here](#))) this allowance would be insufficient to deliver growth investments where growth exceeds the forecasts used to inform the Final Determination. Whilst the existing Growth PCD allows for flexibility if growth materialises in different areas to those assessed in the FD, it is insufficient where the overall level of growth exceeds that assumed across the programme as a whole.

- (395) Anglian had previously proposed a two-sided PCD for growth at Sewage Treatment Works. The mechanism would return allowances to customers if enhancement growth schemes were not delivered by the end of the AMP, and also support additional allowances where capacity beyond that covered by enhancement allowances was delivered. Anglian considers that this approach offers a more agile and responsive alternative to Ofwat's proposed cost change process, providing greater certainty and flexibility for companies to deliver growth investment in line with actual demand.
- (396) However, Anglian notes that no such mechanism has been supported in the PDs. This is a missed opportunity to reflect the dynamic and uncertain nature of growth. Growth does not follow fixed five-year cycles; it is shaped by evolving government ambitions, local development plans, and market conditions. The government has made clear its expectation that infrastructure providers must work at pace to enable housing and economic development. This requires a regulatory framework that is equally agile, able to respond to emerging pressures while protecting customers.
- (397) Absent of a two-sided PCD, Anglian would require upfront funding for the additional growth. This is not Anglian's preferred approach as it would continue to set allowances based on a fixed view of growth, without the ability to respond if growth requirements increase further in the AMP, and would increase Anglian's upfront cost requirements by c.£77m based on Ofwat's modelling approach.
- (398) Anglian considers that it would be better for customers and to support wider economic growth, to instead allow a two-sided PCD with additional allowances where growth is higher than expected based on Ofwat's Growth at STWs modelling approach. Anglian would be happy to support the CMA in understanding how such an approach would work in practice.

5 Supply interconnectors

- (399) The CMA explores the following adjustments to Ofwat's water supply interconnector models, in response to concerns raised by Southern Water on the performance of these models in setting cost allowances.

- (i) Changes to the log-bias correction formula, to reflect the full dataset that is used in the relevant models.
 - (ii) Use of a forecast indicator variable in a model that combines historical and forecast data. This contrasts to Ofwat's approach, where it estimates two separate models – one using historical data and the other using forecast data.
 - (iii) Introduction of a pseudo-Poisson maximum likelihood (PPML) estimator. This is justified on the basis that it does not require a log-bias adjustment and the CMA considers the PPML estimator produces more robust models, and does not require extensive outlier analysis.
- (400) Anglian did not dispute the level of funding received for supply interconnectors in its statement of case as it accepted its enhancement allowances in the round given Ofwat found Anglian's enhancement costs to be efficient. Given the limited time available to respond to the CMA's PD, Anglian has prioritised areas in which there is a material negative gap between the PDs and its FD position. Therefore, it has not reviewed the PD approach to interconnectors in detail.
- (401) A priori, the adjustments made to Ofwat's models (to the log-bias correction factor and integrating historical and forecast data) appear to be based on valid concerns with Ofwat's models. The rationale for applying a PPML model does not appear entirely clear, particularly as the CMA already sets out an approach to resolve its concerns with the log bias correction factor. The relevance of these models being widely used in trade applications to cost efficiency applications is unclear.
- (402) Critically, the PPML estimator is not subject to the same issues with circularity that affect the GMR approach used to set P-removal allowance at the PD. Individual schemes *will* have an effect on the general cost function - particularly given the small size of the sample (39 observations) - but will not have the same 1-to-1 impact on the individual costs allowed for that scheme.

(403) Anglian considers that the CMA's approach on interconnectors reflects a reasonable basis for setting these allowances. At a minimum, as summarised above, it addresses two issues identified with Ofwat's FD approach.

6 Leakage

(404) Anglian agrees with the allowances set by the CMA for leakage, and through the course of the redetermination it appears that Anglian, Ofwat and the CMA are all in agreement on this point.

Chapter E

Chapter E.1

Outcomes

Anglian welcomes the CMA's engagement with the concerns raised on the outcomes framework in Anglian's SoC, and the changes it has made in its PDs. However, the CMA needs to go further as two broad problems remain.

The CMA's PDs do not go far enough to address industry-wide ODI miscalibration at source. Anglian's position across the ODI package remains unduly stretching relative to other companies. In particular, the PD fails to recognise the non-sewer causes of pollution incidents and Ofwat's latest consultation on changes to three PR24 environmental performance commitments⁹⁴ risks rendering ineffective the improvements which the CMA made to the total pollutions ODI rate in its PDs. The CMA must fully address flaws in cross-company comparisons of pollution incidents and implement the proposed changes to Anglian's external sewer flooding PCLs. Even with these changes, Anglian would still face one of the most demanding ODI packages and expects to incur significant net penalties.

These problems with the performance framework are exacerbated by the CMA's reduction of Anglian's base cost allowances.

Anglian now requests that in its Final Redetermination the CMA makes the following simple adjustments to improve the balance of incentives:

- (i) Removes the OAM deadband (although Anglian's view has always been that it is better to address miscalibration 'at source' where practical; at this stage in the process, the OAM can provide a simpler backstop against miscalibration and removing the deadband can eliminate unintended downwards skew without harming incentives);

⁹⁴ Ofwat, Consultation on changes to three PR24 environmental performance commitments, published on 29 October 2025 (consultation closes on 10 December 2025), available at [Consultation on changes to three PR24 environmental performance commitments - Ofwat](#).

- (ii) Uses 2024/25 data to inform calibration of PCLs and ODI rates, at least where there is a material impact;
- (iii) For total pollution incidents;
 - (a) Sets a PCL accounting for the concerns raised by Anglian in relation to normalisation
 - (b) Retains at least the reduction in ODI rate it has proposed, which remains a large increase over AMP and is higher than Anglian's evidence suggests it should be;
 - (c) Provides as clear direction to Directs or steers Ofwat to ensure that the changes on which it is currently consulting do not ignore and reverse the CMA's view and engages with the EA and CMA to consider a broader range of options in resolving this issue;
- (iv) Adopts Anglian's proposed PCL for external sewer flooding; and
- (v) Retains the evidence-based approach to leakage and water supply interruptions set out in the PDs.

1 ODI package remains unduly stretching for Anglian and the industry

1.1 Across the industry the ODI package remains unduly stretching, even under the CMA's approach

(405) There is clear evidence that Ofwat's miscalibration of its ODI package has not been fully addressed by the CMA's PD and the CMA acknowledges some of the asymmetry in the PDs (PDs, ¶8.66). The following issues are taken in turn below:

- (i) The 2024/25 PCL baselines.
- (ii) The improvements required by the end of AMP8 (i.e. 2029/30).

1.1.1 There is clear evidence the 2024-25 baselines are inappropriate

(406) For the majority of common PCs, Ofwat's approach to setting PCLs for AMP8 involved setting a PCL baseline for 2024/25. For these PCs, the PCLs for each year of AMP8 were generally either: (a) set on a glide path involving annual performance improvements from the baseline; or (b) set

at the same level as the baseline throughout AMP8 (e.g. zero serious pollution incidents). In either case, an incorrectly calibrated baseline will adversely affect the PCLs for all of 2025/26 to 2029/30.

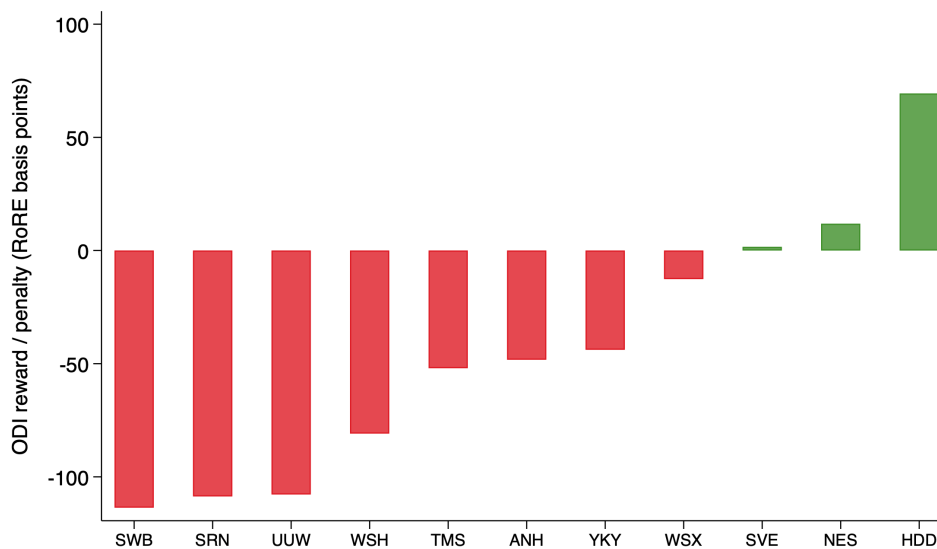
(407) Anglian has assessed the 2024/25 baselines against industry outturn performance which was not available when the SoC was developed. This shows that the Ofwat 2024/25 baselines are, overall, too demanding and that the assumed rates of performance improvement over time are excessive, even after taking account of changes made by the CMA to the water supply interruptions (“**WSI**”) PCL.

(408) The chart below shows the net ODI position for each WASC (pre-OAM) implied by each company's 2024/25 performance against the 2024/25 baselines, applying the PR24 ODI rates, caps, collars and deadbands.⁹⁵ Anglian has included the CMA's change to WSI PCLs and the ODI rate for total pollution incidents, and applied them to all WASCs to illustrate the remaining miscalibration.⁹⁶

⁹⁵ The chart covers the following PCs: CRI, DIS, ESF, ISF, LEA, MRP, NHH, PCC, POL, SCO, SPL, UNO, WQC and WSI. Due to lack of data for 2024/25, the analysis does not take account of: Thames Water and HDD's performance on external sewer flooding, and performance by water only companies on serious pollution incidents. Further information on the approach to this analysis is provided in Annex 11 (ODIs and PCDs).

⁹⁶ In particular, Anglian took account of the CMA's provisional conclusions in its PD on the following: revised PCL levels for Anglian Water for external sewer flooding; revised ODI rates for total pollution incidents for relevant disputing companies; revised PCL levels for water supply interruptions for disputing companies; revised PCL levels for leakage for Anglian Water and South East Water.

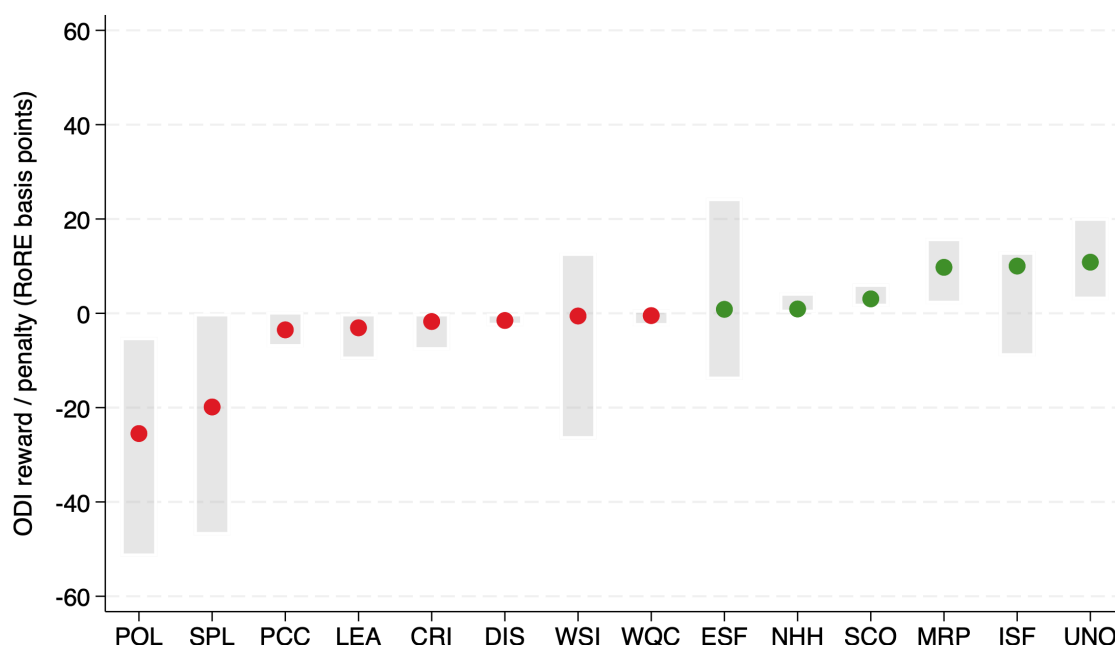
Figure 17: Hypothetical ODI impact of 2024/25 outturn performance vs PCL 2024/25 baselines for WASCs after CMA changes (pre-OAM)



(409) There remains a clear negative skew across the WaSCs. Furthermore, it is important to look at the balance of risk for individual PCs.

(410) In the chart below, Anglian draws on the same analysis of outturn 2024/25 performance against the 2024/25 PCL baselines to show ODI penalties and rewards for individual PCs. In this chart, for a specific PC, the red dot indicates an ODI penalty for the median-performing company for that PC (relative to its own PCL); a green dot indicates an ODI *reward* for the median-performing company for that PC and the grey shaded area is the inter-quartile range across companies. Again, this analysis applies the CMA's changes to WSI and total pollutions across the industry.

Figure 18: Hypothetical ODI impact of 2024/25 outturn performance vs 2024/25 PCL baselines: median and inter-quartile range across companies



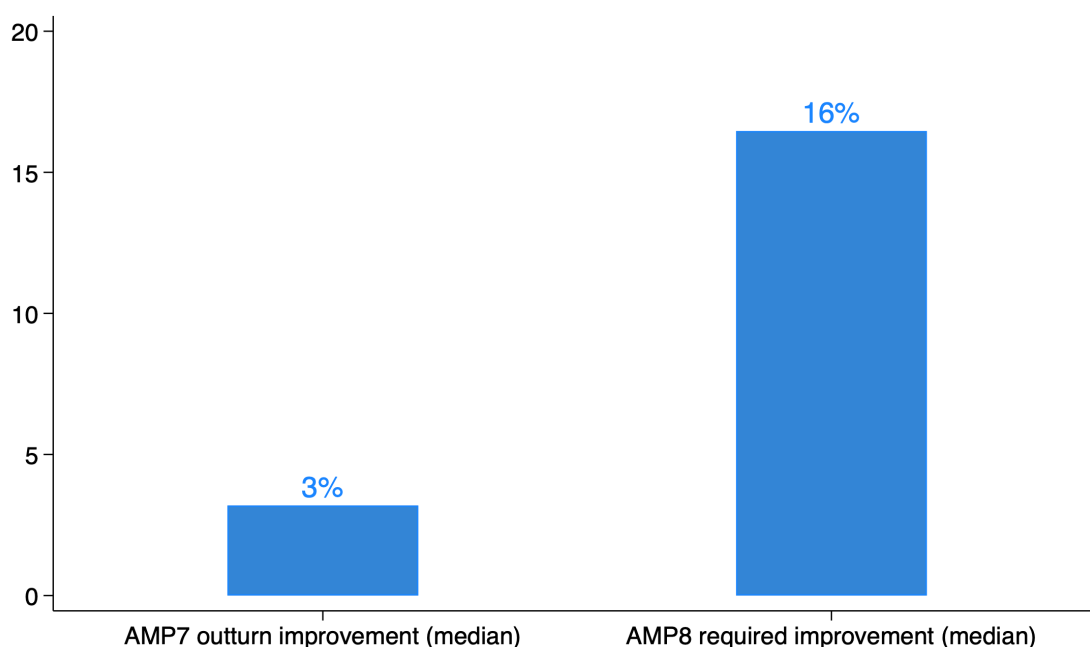
(411) The chart shows that some PCs are heavily downward-skewed for the industry as a whole. The scale of the total and serious pollutions downside skews the overall balance of risk and reward across the ODI package, even after the CMA's changes.

1.2 The improvements required by 2029/30 remain unduly stretching

(412) There is clear evidence that the improvements required by 2029/30 under the PCLs are unduly stretching even after the CMA's changes. The chart below compares the aggregate improvement that companies have delivered over AMP7 with the improvement required over AMP8 if companies are to meet their 2029/30 PCLs.⁹⁷

⁹⁷ Further information on the approach used and scope of PCs covered is provided in Annex 11 (ODIs and PCDs).

Figure 19: Outturn performance improvements across PCs over AMP7 vs improvement required in AMP8 to meet PCLs



(413) This is clear evidence that the rates of improvements required to meet the PCLs by 2029/30 are unattainable. Annex 11 (ODIs and PCDs) provides further evidence on this issue.

(414) In its PD, the CMA states that the “*regime for base costs effectively sets allowances reflecting the average level of performance in the sector. If a company seeks to exceed that level of performance, and if this generates additional costs, then these additional costs are not directly funded through base allowances*”. But the CMA has not followed through the implications of this for the level of stretch in the AMP8 PCLs which expect performance significantly better than average.

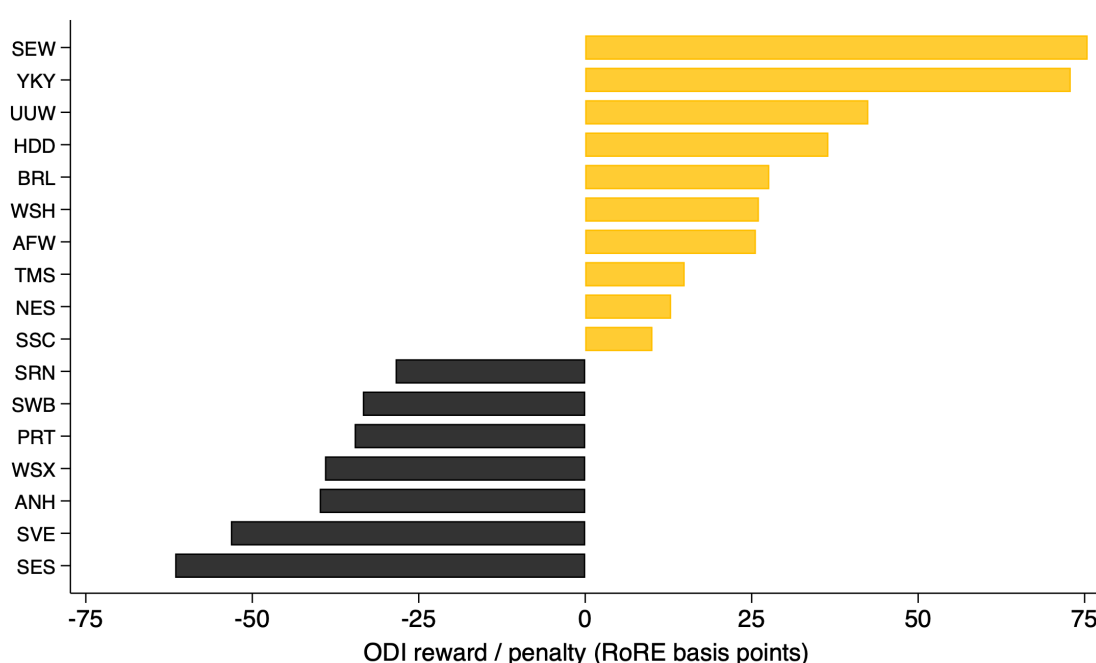
1.3 Anglian’s ODI package remains unduly stretching relative to other companies

(415) Against the backdrop of this industry-wide miscalibration of PCLs that has not been resolved in the CMA’s provisional determination, Anglian continues to face an unduly demanding ODI package relative to other companies.

(416) The chart below draws on recent data to calculate how a notional company that performed at the industry median level of performance for each

common PC in 2024/25 would fare in terms of ODI penalties or rewards depending on which company's 2024/25 PCL baselines (and AMP8 caps, collars and deadbands) it faced.⁹⁸ This provides a practical way to compare ODI packages between companies, because it assumes the same level of absolute performance for each company.⁹⁹ Again, this analysis assumes the CMA's changes to the PCLs for WSI and the ODI rate for total pollutions apply to the whole industry.

Figure 20: Comparison of how demanding each company's ODI package (post-PDs) would be for a median-performing company in 2024/25



(417) The chart shows that Anglian faces one of the most demanding ODI packages in the industry. Anglian's ODI package in the 2024/25 baseline year is around 50 basis points more stretching than the industry average. Anglian's package is the third most demanding across all companies and second most demanding across WaSCs, despite the provisional changes

⁹⁸ For this chart, Anglian took the PCLs and ODIs of each company from FD, applied the common or industry-wide changes from the CMA's PDs to all companies, and applied the CMA's company-specific changes to applicable companies only (e.g. the revised PCL for external sewer flooding only applied to Anglian). See Annex 11 (ODIs and PCDs) for further information on the approach to the analysis and scope of PCs covered.

⁹⁹ For a number of PCs there is gradual convergence across companies in PCLs so the relative position is not as stark at the end of AMP8, but the problems in the intermediate years of AMP8 remain.

that the CMA makes to Anglian's PCL for external sewer flooding in its PDs. There are four PC covered in the analysis above or which Anglian's AMP8 PCLs are more demanding than the median across companies (of which external sewer flooding is a particular concern); there are no PCs for which Anglian's PCLs are *less* demanding than the median PCLs.

(418) The chart above excludes leakage and per capita consumption, where performance improvement is at least in part funded by enhancement linked to the WRMP. While having sector leading targets does increase the risk of falling short, Anglian believes the solution lies in funding the demanding levels of leakage improvement it faces, rather than reducing the targets.

(419) Furthermore, the chart does not capture the adverse impacts to Anglian from Ofwat's flawed approach to comparing the total number pollution incidents across companies. The assumed median performance on this measure, for Anglian, is unduly more difficult than it would be for other companies because of the way performance is normalised. This is discussed further in section 4.1.1 below.

2 Use of 2024/25 data to inform calibration of PCLs and ODI rates

(420) Anglian has applied updated 2024/25 data to PCLs and ODI rates, with the results set out in Annex 11 (ODIs and PCDs) and supporting source files provided with this submission (Annex 17: Datapack ODI rate models updated with 2024-25 data). Anglian asks that the CMA updates PCLs and ODI rates in its redeterminations to reflect the latest available 2024/25 data. Whilst in principle the update should apply to all PCs, Anglian considers that the most material PCs affected by this update are total pollution incidents (for both PCL and ODI rate), serious pollution incidents (ODI rate), and operational greenhouse gas emissions (PCL). There is also a case for updating the other PCs that the CMA has considered so far in its assessment of PCLs, such as water supply interruptions and external sewer flooding.

3 OAM deadband

(421) The CMA's PDs have not adequately addressed industry-wide downside risk at source. Although Anglian's view has always been that it is better to address miscalibration 'at source' where practical; at this stage in the process, the OAM can provide a simpler backstop against miscalibration and removing the deadband can eliminate unintended downwards skew without harming incentives. This section makes three points in relation to the OAM:

- (i) The OAM (without deadband) is a proportionate remedy in the context of the CMA's redetermination.
- (ii) Legitimate concerns about rewarding poor performance can be addressed through a practical refinement of the OAM.
- (iii) if a deadband is to be retained, 50 basis points is arbitrary and excessive.

(422) In its SoC, Anglian proposed removal of the OAM deadband. This was supported by other Disputing Companies. The primary reason the CMA gave in its PD for retaining the deadband is that the CMA considered that it had addressed concerns about the ODI package at source and that the remaining negative skew is small.

(423) However, the CMA's assessment seems to have focused on a small subset of PCL and ODI calibration issues, combined with a high-level review of the relative merits of the risk analysis carried out by KPMG and Ofwat in respect of ODIs.

(424) The CMA's provisional view that any remaining downward skew is small is not consistent with the latest available evidence, as demonstrated above and explained further in Annex 11 (ODIs & PCDs). Even after the PDs, the AMP8 PCLs are set in a way that means that it is unlikely that an efficient company achieving them would recover its costs, which is not in the long-term interests of customers. As shown above, the level of improvement expected in AMP8 is significantly higher than was achieved by the industry in AMP7 and given the levels of base funding provided an outcome of

systematic underperformance is the most likely outcome as was the case in AMP7 (ANH SoC, page 117).

3.1 The OAM (without deadband) is a proportionate remedy in the context of the CMA's redetermination

(425) In principle, the CMA could address concerns about excessive downside via targeted action at source. However, this detailed intervention on all PCs would be more challenging than updating the 2024/25 baselines and would require further consultation. Another potential remedy would be to increase base cost allowances to fund the PCLs sufficiently. However, outside of the specific case of leakage where this has been costed (PDs, ¶¶6.314-6.316), it would be a relatively challenging exercise to determine incremental cost allowances within the remainder of the CMA's process.

(426) In contrast, the removal of the OAM deadband provides a practical and proportionate way to address the remaining industry-wide calibration problems. When preparing Anglian's SoC, Anglian endeavoured to support the CMA in meeting its overriding objective so favoured the OAM over other sweeping interventions.

(427) With the deadband removed, the OAM would protect companies and customers from unintended uncertainty. Even with the best will in the world, and ample time for analysis of the available evidence, a set of PCLs that look well-calibrated ex ante could turn out to lead to a significant skew of rewards or penalties across the industry ex post. This in turn could have an adverse impact on public perceptions, customer trust, investor sentiment, financial resilience and the cost of capital. The CMA must give greater consideration to the risks to the future cost of capital if the industry experiences another AMP in which ODI performance is skewed toward penalties.

3.2 Legitimate concerns about rewarding poor performance can be addressed through a practical refinement of the OAM

(428) In its provisional assessment of the case for removing the OAM deadband, the CMA rejected the majority of arguments that Ofwat has put forward for retaining the OAM deadband, but did express concern that: "*the removal*

of the deadband could result in potentially rewarding poor performance across the industry’. (PDs, ¶ 8.186).

- (429) Anglian understands this concern in principle, although it disagrees that missing a PCL necessarily implies poor performance, given the unduly stretching targets. This has been experienced by Anglian in AMP7 where leakage has reduced since AMP6 and the lowest level in the industry is being maintained but the company has missed the very stretching PCL improvements. Where performance hasn’t degraded in absolute terms it is reasonable for that company to earn an ODI reward from its strong relative performance.
- (430) However, unadjusted, the OAM could lead to a situation in which industry performance worsened but a company experiencing a smaller worsening was rewarded and that could understandably lead to public perceptions of unfairness. The OAM could straightforwardly be adjusted to avoid this outcome, for example by creating a safeguard such that no upward financial adjustment would be applied across the industry *insofar as median-performing companies face net ODI penalties from performing worse than the 2024/25 PCL baselines*.¹⁰⁰
- (431) This is a targeted and proportionate response to the CMA’s remaining concern about removing the OAM deadband. It would re-focus the OAM on the rates of improvement over time relative to the 2024/25 baselines. It would also require targeted action at source, by the CMA, on the 2024/25 baselines (e.g. for total pollution incidents).

3.3 If any form of deadband is to be retained, 50 basis points is excessive

- (432) Should the CMA choose to retain a deadband, the CMA must recognise that + / – 50 basis points on RoRE is too wide a deadband to apply. To help put this into context, the CMA’s PDs have sought to update and correct Ofwat’s cost of equity by increasing it by circa 80 basis points, but

¹⁰⁰ In broad terms, this can be done by calculating, for each company and PC, the OAM penalty that would apply if the company’s performance was worse than its 2024/25 PCL baselines and then treating that as a maximum ODI penalty for that company and PC for the purposes of calculating the median company RoRE penalty (or reward) used to calibrate OAM adjustments.

much of that change to the cost of equity could be wiped out by the RoRE impact companies could face from industry-wide ODI penalties, due to the application of such a wide deadband.

(433) In its PDs the CMA seemed willing to tolerate a downside skew of up to -0.2% for a notional company on the ODI package (PDs, ¶ 8.66). But even if the CMA does intend for there to be a downside on the ODI package of *up to* -0.2% then this cannot justify a deadband of more than 20 basis points on RoRE.

4 Total pollution incidents

4.1 Total pollution incidents PCL

(434) The CMA PDs do not address the unrealistic and unfunded expectations of performance on total pollution incidents set by Ofwat's FD. This remains a concern that recent EA¹⁰¹ and Ofwat¹⁰² announcements do nothing to address. The CMA needs to address this in its own FD.

4.1.1 Normalisation concerns are not adequately addressed in the PD

(435) Ofwat's current methodology benchmarks each company's average annual number of pollution incidents per length of sewer over the four-year period to 2023/24, before applying the median value across all companies as the 2024/25 PCL baseline. Ofwat's approach is plainly wrong in failing to take account of any sources of pollution other than sewer length, as Anglian's submissions demonstrated. This leads to thoroughly unrealistic PCLs. Even if Anglian were to reduce pollution incidents by 50% from 2024/25 to 2029/30 it would still incur circa £75m of penalty using the CMA's incentive rate (down from £110m using the Ofwat's incentive rate).

(436) The CMA's PDs do not engage with Anglian's specific concerns about this, stating that it is a matter for the EA (PDs, ¶6.196). It is fundamental to

¹⁰¹ Environment Agency, Reporting and Environmental Performance Assessment (EPA) review for water and sewerage companies 2026 to 2030 Conclusion of consultation responses summary – Environment Agency, October 2025, Section 5.1.2.

¹⁰² Ofwat, Consultation on changes to three PR24 environmental performance commitments, 29 October 2025 (consultation closes on 10 December 2025), available at [Consultation on changes to three PR24 environmental performance commitments - Ofwat](#).

procedural fairness that all material representations are properly considered and evaluated on their merits, especially when significant financial implications are at stake and thus the topic is squarely within Ofwat's and the CMA's duties.

- (437) For the avoidance of doubt, Anglian's submissions do not relate to the measurement of individual companies' performance for the purposes of environmental reporting under the Environmental Performance Assessment (EPA) reporting. Rather, Anglian's concern is with Ofwat's *use* of such measurements (designed for environmental reporting) in its role as economic regulator to set financial incentives, and the fairness of the resulting comparisons.
- (438) Regulatory alignment is generally desirable but it is not an overriding objective. The EA's EPA framework is designed for comparative annual performance reporting, not setting financial penalties or incentives. In contrast, PCLs set by Ofwat can trigger significant financial consequences through ODIs. The CMA should therefore address this issue, as part of its redetermination of the price control.
- (439) At the time of the provisional determination, there were unresolved regulatory uncertainties regarding how PCLs for total pollution incidents would operate for AMP8. The Environment Agency ("**EA**") and Natural Resources Wales ("**NRW**") had yet to publish final decisions on the relevant EPA metric, including key aspects of normalisation across companies. Ofwat, for its part, provided for a change protocol as part of its PR24 final determinations, indicating a willingness to revisit PCLs and ODI rates if the EPA metric changed. The CMA provisionally found that this process would provide an appropriate mechanism for addressing changes.
- (440) However, the EA has now made clear that its approach to normalisation will remain unchanged. Consequently, there is no prospect of the Ofwat change protocol addressing the substantive concerns with benchmarking raised by Anglian. In circumstances where there is no alternative redress, it is more important than ever that the CMA properly consider Anglian's representations.

- (441) The EA's consultation on normalisation presented only two options, of which the current approach is simply less unsatisfactory than its alternative. Anglian is concerned that the EA is not the right body to design a benchmarking regime that is both fit for purpose and robust for high-powered financial incentives in the price control. The EA's assessment appears to depend heavily on a preliminary and limited academic study from the University of Brighton, without sufficient industry consultation or examination of alternatives. The reliance on correlation and regression analysis to justify the chosen proxy does not address substantive evidence put forward by Anglian demonstrating that alternative methods would provide a more accurate and equitable basis for financial regulation. The rationale given by the EA (primarily that alternative models would involve greater complexity) fails to engage with the weight of the evidence, particularly in a price control context where evidence-based decision-making and proper consideration of relevant factors outweigh administrative convenience.¹⁰³
- (442) In its submissions, Anglian has suggested two superior approaches for normalising pollution incidents across companies: normalisation by adjusted sewer length, and weighted averages across asset categories (ANH SoC, ¶478-493). Both are workable and would deliver broadly similar outcomes for Anglian in AMP8. Detailed evidence supporting these alternatives, together with an updated analysis, has been provided to the CMA and the EA/NRW consultation.¹⁰⁴
- (443) Anglian has re-assessed whether the statistical evidence supporting the superiority of its proposed approach remains robust when updated for 2024/25 data. The analysis demonstrates that the underlying logic and statistical evidence continue to apply if, as Ofwat intends, Ofwat's PC metric is updated to include incidents previously classified as category 4

¹⁰³ Environment Agency, Reporting and Environmental Performance Assessment (EPA) review for water and sewerage companies 2026 to 2030 Conclusion of consultation responses summary – Environment Agency, October 2025, Section 5.1.2.

¹⁰⁴ Anglian Water, Appendix to Anglian Water's response to the Environmental Performance Assessment (EPA) consultation (November 2024), Sections 3.4 and 4 (Annex 028).

pollution incidents, following changes introduced by the EA. Anglian has provided an updated workbook showing how the normalisation and associated PCL would be update for 2024/25 data.¹⁰⁵

(444) In summary, it is imperative, as a matter of both procedural fairness and efficiency to set this element of the price control correctly, and that the concerns previously raised by Anglian about Ofwat's normalisation approach are fully addressed in the CMA's final determination. Anglian's proposed alternative benchmarking methodology is robust, evidence-based, and better-suited to price control determinations.

4.1.2 The PCL baseline for 2024/25 is inappropriate in the context of the sectors entire AMP7 performance

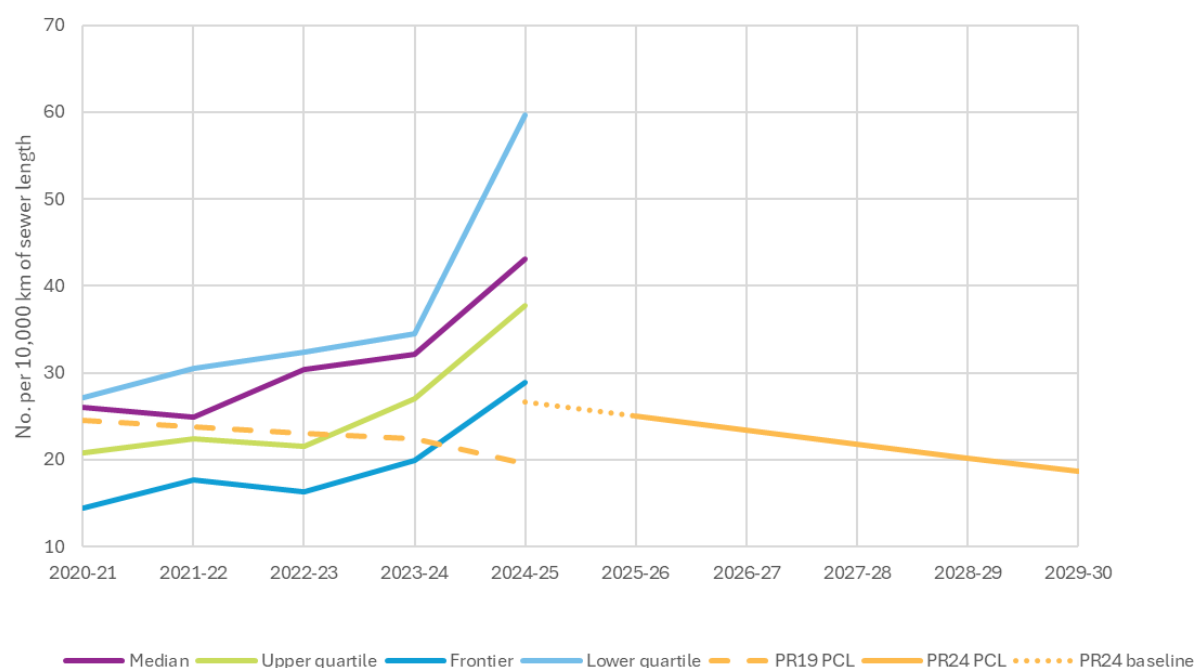
(445) In its SoC Anglian explained that there had been upwards pressure on industry performance, largely driven by increased greater visibility of incidents (ANH SoC, ¶458-464) and that funding through base alone does not suffice to achieve stretching Ofwat's PCLs to reduce total pollutions (ANH SoC, ¶508).

(446) The SoC also explained Anglian's proactive performance improvement plan include an additional £100m investment by Anglian's shareholders in 2024/25 seeking long-term performance improvement (ANH SoC, page 130 (section 5.2.2)). While total pollution incidents increased in 2024/25 Anglian saw a significant reduction in serious incidents – those that cause the most harm to the environment – with a 36% reduction and Anglian's lowest number since 2012-13.

(447) Since submitting its SoC, the industry trend for total pollutions has continued in 2024/25 with even the frontier company, Yorkshire Water, reporting performance worse than the FD's 2024/25 baseline. Industry performance relative to the PR19 and PR24 PCLs is shown in the figure below.

¹⁰⁵ Annex 14 (PD Revised SoC Proposed PCLs POL).

Figure 21: Industry performance and PCL for total pollution incidents in AMP7¹⁰⁶



(448) Despite the parallel change process being run by Ofwat in light of changing expectations of the EA, this PCL will apply at least in 2025-26. As such it is material that the CMA consider it in its FD. The mis-calibration of the Total Pollution Incidents PC creates material risk asymmetry for water and sewerage companies, particularly Anglian.

(449) In light of the industry's performance Anglian proposes that the baseline and PCLs in AMP8 should be updated. Anglian, proposes the CMA adds the additional year of data so that PCL baselines are calculated using the full five years of AMP7 data (rather than the first four years) with a 30% reduction applied by the end of AMP8. Anglian provide the resulting PCLs (for both the FD's approach to normalisation and Anglian's proposed approach) in annexed version of the PCL models.¹⁰⁷

¹⁰⁶ Annex 12 (PD AMP7 industry pollution performance).

¹⁰⁷ Annex 13 (PD Revised PR24-FD-CA13-Total-pollution-incidents-v3-1) and Annex 14 (PD Revised SoC Proposed PCLs POL).

(450) Adding this additional year of data allows recent performance and its causes to be reflected, without putting all the emphasis on a single year or recent years.

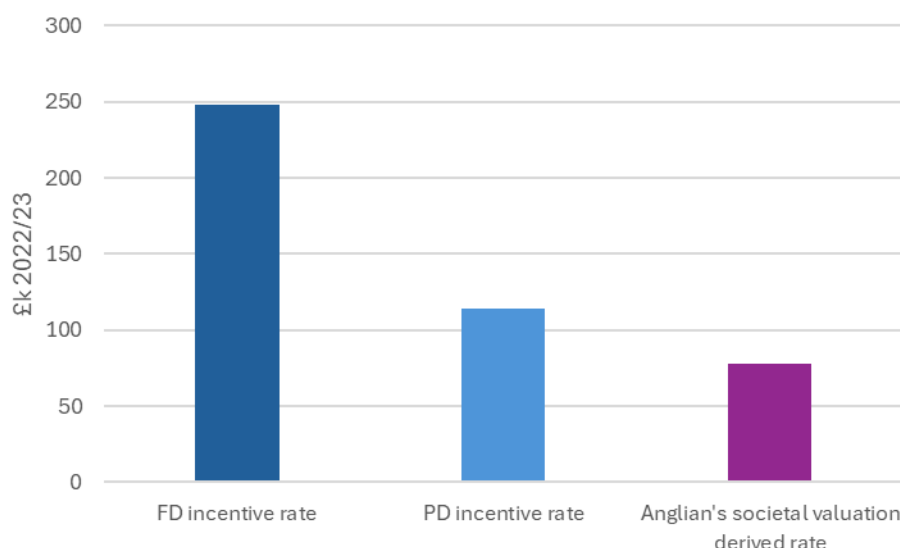
(451) Despite a 30% improvement from base funding being an unrealistic expectation, adjusting the baseline in this manner is more realistic than Ofwat's FD. It is more consistent with the industry's actual position and with the level of performance that is funded by base cost models (for another PC, WSI, the CMA noted that base cost allowances should fund average performance) (PDs, ¶ 6.228).

4.2 Total pollution incidents incentive rate

(452) Anglian welcomes the CMA's decision to reduce Ofwat's ODI incentive rate for total pollutions. This reflects concerns with Ofwat's use of PR14 performance target data in setting the rate and the way this led Ofwat to underestimate the degree of risk faced by companies in PR24. The CMA's PD brings the ODI unit rate more closely into line with the societal value of a pollution incident (ie the value to Anglian's customers and community of a pollution incident).

(453) The chart below shows the CMA's proposed rate against Ofwat's FD rate and Anglian's proposed social value rate.

Figure 22: Comparison of incentive rate per incident for total pollution incidents



4.2.1

- (454) Anglian welcomes the CMA's provisional view that Ofwat's PR24 FD approach to setting the pollution incident ODI used an 'inappropriately narrow performance range' (PDs, ¶6.401) of 66% and that the approach 'resulted in a significant underestimate of the relevant performance range' (PDs, ¶6.405). Anglian agrees with the CMA's view that this underestimates the degree of risk faced by companies (PDs, ¶6.398).
- (455) Anglian agrees with the CMA's decision that a better approach to set the performance range is to consider performance deviations from a common proxy PCL for each year of PR14 and the use of a common proxy PCL for the PR14 years as the mid-point between the P10 and P90 bespoke PCLs in the relevant year.
- (456) Anglian notes Ofwat's query in relation to the CMA's calculation of the common proxy PCL and their view that it would be more consistent with the PR24 approach to use PR14 performance to create the proxy PCL.
- (457) Anglian disagrees. The CMA's approach is consistent with Ofwat's PR24 methodology. At PR24, Ofwat used a range of approaches to set proxy PCLs, depending on the historical data available and reflecting the incentives provided to companies at the time. For example, Ofwat used PR19 performance data for storm overflows to create a common proxy PCL, while for Bathing Water Quality Ofwat set a proxy PCL for each company based on their company median score for all previous years of available data
- (458) If anything, the CMA's changes do not go far enough. In Anglian's post hearing submission¹⁰⁸ Anglian outlined that Ofwat's rate was insufficiently evidenced. It was derived from an approach that was mechanistic, developed late and amended significantly just before DD and then again between DD and FDs. Ofwat's method was highly sensitive to the input assumptions, resulting in significant risk allocation seemingly beyond Ofwat's original policy intent.

¹⁰⁸ Anglian Water: Post Hearing Submission, page 5.

- (459) There are three particular concerns about the excessive rate imposed by Ofwat that Anglian highlighted in the hearing. Alongside this response Anglian have provided an annotated workbook¹⁰⁹ with extracts from Ofwat's incentive rate model that illustrate these concerns:
- (460) Overallocation of RoRE: Anglian's RoRE risk (0.78%) is higher than Ofwat's 0.6% intent. This is driven by a calculation to deliver a consistent unit rate which disadvantages Anglian due to its large number of sewers relative to its RCV.¹¹⁰
- (i) Performance variation: Ofwat's RoRE allocation is highly sensitive to its selected data window which is based on its view of likely variances vs. targets, using historical variances (Ofwat OP, Slide 11). But these are significantly understated by differences between AMP6 (7% variance) and AMP7 (284% variance). Whereas adding later years (eg. 23/24 and 24/25) significantly reduces the rate and removing AMP6 has an even greater effect.
 - (ii) Reference point: Used to assess from when historic % variances will occur in future, Ofwat set rates using the end AMP7 PCL, not the 24/25 baseline that changed in the FD. This wasn't reflected in Ofwat's rate calculation, which would reduce the incentive rate by 25% vs. the FD.
- (461) Anglian raises these points again for two reasons. First, they demonstrate that the CMA's welcome changes to the ODI rate do not fully correct for the shortcomings of Ofwat's original process and rate. Second, Ofwat is now proposing changes to the ODI rate which would remove the effect of the CMA's provisional determination and maintain the excessive financial penalties that the CMA rightly rejected. This is discussed in the following section.

¹⁰⁹ Annex 15 (PD PR24-FD-OC03-ODI-rates-v2_ANH_Notes).

¹¹⁰ Slide 3 of Anglian's slide from the hearing on 7 July.

4.3 Total pollution incidents - changes to categorisation of pollution incidents and Ofwat change control

(462) On 15 October 2025 the Environment Agency (EA) published its decision on the Environmental Performance Assessment¹¹¹ and guidance for categorisation of pollution incidents. This confirmed the changes Anglian described in its SoC, namely the inclusion of incidents previously designated category four (no impact) and dry day spills from storm overflows as part of the performance commitment (ANH SoC, page 143 (section 5.5.2)).

(463) On 29 October 2025 Ofwat published a consultation¹¹² on amending elements of this performance commitment (as well as others). Ofwat is proposing:

- (i) Setting the PCL as outturn industry median;
- (ii) Tightening the incentive cap and collar to 0.5% of RoRE;
- (iii) Reducing the incentive rate; and
- (iv) Other amendments to the definition to align to the EA's approach e.g. exclusions for flooded assets.

(464) Although there is no final decision and Anglian have had limited time to assess the proposals, Anglian are deeply concerned about the direction of travel in Ofwat's consultation because it:

- (i) incentivises **the industry to focus resources on low impact escapes** Widening the scope of the performance commitment in this way means companies will have the same incentives to reduce incidents that have historically been considered as having no impact as far more serious incidents.

¹¹¹ Competition and Markets Authority, Water and sewerage companies: EPA methodology for 2026 to 2030 (See [here](#)).

¹¹² Ofwat, Consultation on changes to three PR24 environmental performance commitments (October 2025) (See [here](#)).

- (ii) **duplicates incentives.** Dry day spills will be incentivised by both the total pollution incidents *and* storm overflows performance commitments with no recognition of the overlap in the proposed incentives rates in Ofwat's consultation.
 - (iii) **lacks robust data.** The EA have opted to gather two years of actual data before setting a performance threshold for their reputational incentive through the EPA. In contrast, Ofwat have opted to set material financial incentives for the industry at 0.6% of RoRE (that is up to £1.45bn for AMP8 for the WaSCs) on this limited data.
 - (iv) **Exacerbates existing problems with the measures.** Adding a significant additional number of incidents raises further questions about the validity of normalising by sewer length as even more incidents will occur from assets that aren't sewers.
- (465) Improvements to normalisation must be made alongside Ofwat's approach of setting PCLs based on outturn performance Ofwat has proposed that PCLs for total pollution incidents are calculated annually in the light of each year's outturn performance across the industry, with the PCL determined by the median level of performance
- (466) Anglian's concerns about Ofwat's inadequate approach to normalisation become still more pressing, if the sole basis for ODI under- and out-performance is how Anglian compares to other companies.
- (467) In its SoC, Anglian proposed that the adjusted sewer length metric be used instead of sewer length. It is reasonably straightforward to use adjusted sewer length rather than sewer length as the basis for the cross-company comparisons (and calculation of median performance levels each year) while retaining PCLs that are expressed in terms of incidents per 10,000km sewer.
- (468) This could work as follows in each year of AMP8: (i) take each company's total absolute number of pollution incidents (i.e. before normalisation by sewer length etc); (ii) divide the total for each company by the adjusted sewer length metric for that company calculated on 2023 asset data; (iii)

take the median across companies of the figure from step (ii); and (iv) set the PCL for each company in that year as the median from step (iii) multiplied by the ratio between its adjusted sewer length and sewer length.¹¹³

(469) Anglian has considered the implications of potential changes in the PC scope for the approach to normalisation. Our assessment is that, for the purposes of normalisation across companies, adjusted sewer length is superior in statistical and logical terms to sewer length in scenarios where category 4 incidents are included and/or where dry-day spills are included. While dry-day spills physically emanate from a CSO, the causes of dry-day-spills generally reflect issues in other parts of the wastewater system (such as pumping stations, treatment works and sewers which are captured in the adjusted sewer length metric), rather than from a specific problem with the CSO. In 2025 only a third of Anglian's dry-day-spills came from CSOs located within the sewer network. Anglian requests that the CMA determines that, if Ofwat changes the way that PCLs are set, such that these are based on outturn performance data, the method set out above should apply to Anglian. It would be for the CMA to consider whether the approach for Anglian should be applied to other Disputing Companies.

4.3.1 Conclusion

(470) Anglian welcomes the EA's considered approach to data gathering and presentation of like-for-like data during AMP8. Ofwat concluded that the EA's scenarios are not robust enough to set a performance commitment level so it appears inconsistent to use them to set incentives.

(471) Anglian were pleased to see the CMA's steer to Ofwat that the redetermination should be the reference point for appellant companies.²⁵ However Anglian is concerned that Ofwat's consultation and proposals are effectively replacing the CMA's PDs by removing the proxy PCL, leaving Anglian exposed to the same or greater risk exposure than at the PDs. If

¹¹³ With the exception of adjusted sewer length all the data needed is already available under Ofwat's proposed approach. The data on adjusted sewer length for 2023 is provided in the Annex 14 (PD Revised SoC Proposed PCLs POL).

the scale of impact is underestimated then the risk exposure will be greater. Anglian would welcome the CMA being more explicit that Ofwat's on-going process should not undermine the redetermination.

(472) More broadly, Anglian considers that further consideration of potential solutions is merited through discussion between the CMA, Ofwat, EA and appellant companies. Some options for the sector include:

- (i) Applying reputational incentives for two years until sufficient actual data is collected to reset the financial incentives
- (ii) Exclude dry day spills from the scope of the performance commitment (as this data will be disaggregated) until sufficient data is collected to reset the financial incentives while adopting Ofwat's consultation proposals to include category four incidents within the performance commitment.

5 External sewer flooding

(473) Anglian welcomes the attention that the CMA has given to its submissions on the PCL for external sewer flooding.

(474) Nonetheless, the CMA's provisional decision to set Anglian's PCLs for external sewer flooding as a midpoint between the PCLs set in Ofwat's FDs and the PCLs proposed in Anglian's SoC falls short of what Anglian consider is appropriate, for four reasons.

(475) First, the fact that not all companies faced ODIs for this PC does not support the CMA giving 50% weight to Ofwat's FD PCLs. Nine out of eleven wastewater companies had financial ODIs for external sewer flooding in AMP7.

(476) Second, the CMA has not explained how the more demanding PCLs for Anglian Water on external sewer flooding are to be funded from its base cost allowances.

(477) Third, the CMA has placed too much weight on the risk of an "unduly lenient" PCLs for external sewer flooding for Anglian in a context of Anglian

facing a very demanding ODI package relative to other companies under Ofwat's FDs.

(478) Finally, if the CMA's ESF solution were adopted consistently, Anglian should face less demanding PCLs for several other PCs. This is not Anglian's preferred solution (which is simply for ESF targets to be set in the same way as for ISF), but Anglian request the CMA to consider extending such changes if it retains its PDs approach.

(479) Anglian takes these issues in turn below.

5.1.1 The historical context of ODIs for external sewer flooding does not support reliance on Ofwat's PCLs

(480) The CMA expressed concern in its provisional determination about using a median of historical performance across companies when not all companies had a financial incentive on external sewer flooding in AMP7.

(481) However, nine out of eleven wastewater companies had financial ODIs for external sewer flooding in AMP7. The two remaining companies were Thames Water and Hafren Dyfrdwy but all companies had funding for sewer flooding through the botex plus models at PR19. Anglian had already excluded Thames Water from its calculations because Ofwat had raised concerns about the historical data on external sewer flooding for Thames Water. If Hafren Dyfrdwy is also excluded, this has very little impact on the median Anglian is content for these figures to be used for its PCLs if needed as this is a minor matter.

(482) The CMA also expressed concern about setting the PCL from the start of AMP8 based on median historical performance levels, when the AMP7 PCLs were set on a company-specific basis and where there were performance differences across companies during AMP7. Since the CMA has not proposed that changes be made to the PCLs for external sewer flooding for any other companies, adopting Anglian's proposals would not have implications for other companies.

(483) Furthermore, the historical performance data does not give a reason for treating external sewer flooding differently to internal sewer flooding.

Indeed, over AMP7 there were much smaller performance differences between companies on external sewer flooding than there were for internal sewer flooding (or total pollution incidents and water supply interruptions).¹¹⁴

5.1.2 Base cost allowances do not support stretching performance targets

(484) In its PDs, the CMA said that the *“regime for base costs effectively sets allowances reflecting the average level of performance in the sector. If a company seeks to exceed that level of performance, and if this generates additional costs, then these additional costs are not directly funded through base allowances”*. But the CMA has not followed through the implications of this for external sewer flooding.

(485) The CMA’s PD does not explain how Anglian’s costs of achieving its revised PCLs for external sewer flooding are funded. The activity needed to maintain and improve performance includes asset improvements but also on-going customer engagement, network flushing, network surveys and proactive maintenance which have on-going base costs. This is especially relevant given that Anglian’s performance on external sewer flooding in the last three years (2022/23 to 2024/25) has been on average 12% worse than the PCL the CMA has provisionally determined for the first year of AMP8: Anglian would need to make immediate performance improvements relative to its recent performance without any funding from base cost allowances or from ODI rewards.

5.1.3 External sewer flooding is one component of a very demanding ODI package for Anglian

(486) Focusing narrowly on ESF, Anglian’s proposed PCLs from its SoC pose limited risk of being unduly lenient. Under Anglian’s SoC proposals, its average PCL for AMP8 would be 17% more demanding than the median

¹¹⁴ To compare the spread of performance differences across companies, Anglian calculated for each of these PCs the standard deviation across companies of each company’s average performance over AMP7 divided by the median of companies average performance over AMP7. The figure for external sewer flooding was 18% (excluding Thames Water due to the data concerns), compared to 44%, 94% and 238% for internal sewer flooding, total pollution incidents and water supply interruptions respectively. These calculations draw on the AMP7 outturn performance data provided as part of Anglian’s supporting files on updates to PCLs for 2024/25 data.

of the industry's average performance over the three years to 2024/25, and 14% more demanding than Anglian's average performance over the same period. In contrast the CMA's provisional decision on the PCLs would present a high risk of being unduly stretching given the way that this PCL is funded from base costs, as discussed above.

- (487) The risks from of an unduly lenient PCL are even lower when seen in a context where the evidence is that (a) Anglian's wider ODI package is much more demanding than for most other companies and (b) Anglian is not well-placed to outperform overall (even with ESF revised as per its Statement of Case).
- (488) Section 1 above summarises evidence that Anglian has a more demanding ODI package than most companies in the industry. This would still apply if the CMA were to adopt Anglian's proposed PCLs for external sewer flooding in full. For instance the same analytical approach used for that section indicates that even with Anglian's proposed PCLs for external sewer flooding applied, Anglian's 2024/25 PCL baselines (and wider AMP8 ODI rates, etc) would imply an ODI package that is 42 RoRE basis point more demanding than the median ODI package across companies.
- (489) Furthermore, based on analysis of Anglian's 2024/25 outturn performance versus PCLs (using the approach applied earlier in this section), Anglian would face net ODI penalties against the 2024/25 PCL baselines even if the CMA adopted Anglian's proposed PCLs for external sewer flooding in full.

5.1.4 Consistency with other PCs

- (490) The CMA's PDs rightly identified risks with Ofwat's approach of setting PCLs based on past individual company performance (PDs, ¶ 6.169). Further to a risk of weakening incentives to improve performance, the CMA identified a risk that higher levels of performance are not appropriately funded.
- (491) But those risks apply to a number of other PCs beyond external sewer flooding (and beyond leakage which Anglian address elsewhere in its

response) where Ofwat's PCLs give weight to individual company performance, such as water quality contacts, repairs to mains bursts, sewer collapses and unplanned outages.¹¹⁵ For water quality contacts, sewer collapses and unplanned outages, Anglian's average PCLs for AMP8 are more demanding than the median PCLs across companies (for repairs to mains bursts it is the median). Anglian identified no PCs for which Anglian's PCLs are less demanding than the median. If the CMA's provisional approach for external sewer flooding¹¹⁶ were to be applied more broadly, this would be likely to lead to Anglian facing less demanding PCLs for other PCs.

(492) Anglian did not ask for the CMA to make changes to these other PCs in its SoC, only for ESF because of the scale of the problem and the availability of a straightforward and logical remedy: setting the PCLs for external sewer flooding in the same way as those for internal sewer flooding (in line with Ofwat's PR24 methodology decision).

(493) Anglian's primary ask to the CMA is that it adopts the remedy proposed in Anglian's SoC. If, however, the CMA retains its provisional decision on external sewer flooding, Anglian requests that the CMA consider revising the PCLs for the four other PCs mentioned above.

6 Leakage

(494) Anglian supports the CMA's approach to setting the leakage PCL using 2024/25 outturn data as a baseline, with a glidepath to the 2029/30 PCL. There is alignment between Anglian and Ofwat on this and reflects AMP7 performance and the PR19 clawback.

(495) The CMA's proposed approach satisfactorily resolves the issue while preserving strong incentives for leakage reduction. Anglian accepts the

¹¹⁵ The CMA's provisional determinations indicate at Figure 6.4 that there was a common PCL for unplanned outages, with the source for this information attributed to material from an Ofwat teach-in session. This is an error. The PCLs for unplanned outages were not set as a common PCL during AMP8. This can be seen in the PR24 FD document 'Key dataset one'.

¹¹⁶ An intermediate point between the company-specific PCLs from Ofwat's FDs and PCLs set on a more common basis across companies.

PCLs in table 6.13 of the PD and welcomes the updated enhancement model, which confirms the £35.3m allowance as requested.

(496) However, Anglian notes that the stretch required to meet these targets is increased by the CMA's rejection of its cost adjustment claim on leakage. The CMA states that base allowances fund only average performance, while Anglian is already performing well above average. These updated AMP8 PCLs assume Anglian maintains this high level of performance, yet the CMA's funding approach means leading companies like Anglian are not adequately supported to do so. Further detail is provided in Chapter B.2.

7 Water Supply Interruptions

(497) Anglian welcomes the CMA's engagement and decision to set the Water Supply Interruptions PCL baseline for 2024/25 and the AMP8 PCL trending to 5 minutes by 2029/30. This reflects AMP7 sector performance and base funding, aligning PCL setting with other common performance commitments that consider historical trends.

(498) The analysis of industry performance against 2024/25 PCL baselines presented earlier in this chapter (Figure 18 and Figure 19) includes the CMA's PDs changes to WSI PCLs. If the CMA had not altered the PCL in the PDs, the downside skew across the industry would have been significantly worse. With the CMA changes, the balance of upside and downside risk for the water supply interruptions PCL baselines looks much more balanced.

(499) Anglian has also provided updated calculations using 2024/25 data, which make the PCL 1.9% more stretching on average, although not materially different.¹¹⁷

¹¹⁷ See Annex 18 (Datapack PCL models updated with 2024-25 data).

Chapter E.2

Price control deliverables

(500) In its PDs, the CMA has relied on Ofwat's current consultation on the PCD framework to resolve concerns raised by Disputing Companies. Anglian welcomes Ofwat's willingness to improve flexibility and provide additional clarity in relation to the framework.

(501) However, Anglian retains its original request for the CMA to remove at source some unnecessarily prescriptive and burdensome components of the framework. This would contribute to increasing consumers' confidence in delivery which currently risks being distorted.

(502) Anglian also asks the CMA to consider the points outlined below and to provide additional direction to Ofwat in the redetermination to ensure these risks are addressed. Anglian is seeking:

- (i) Greater clarity of which PCDs are within the scope of change control,
- (ii) Inclusion of scheme specific PCDs within change control,
- (iii) A more flexible approach to the materiality threshold,
- (iv) More frequent and timely conclusion of change control windows.

8 Ofwat PCD consultation

8.1.1 Scope and design of the change control mechanism needs refinement

(503) In its consultation, Ofwat notes that companies have limited ability to manage delivery risks for scheme-specific and bespoke PCDs. It outlines three criteria for identifying PCDs eligible for change control but does not provide a definitive list or guidance on other influencing factors.

(504) To reduce uncertainty, Anglian considers that Ofwat should publish a clear list of eligible PCDs and the criteria used to assess them. This would

ensure transparency and acknowledge that delivery flexibility is not a binary issue.

- (505) Anglian retains the view that excluding scheme-level PCDs - such as growth at sewage treatment works and phosphorus removal - from the change control process is not in customers' or environmental interests. More generally, there is a real need for a wider, more pragmatic approach to growth funding that Ofwat's consultation misses. Anglian's concerns regarding growth funding are set out in Chapter D. Enhancement.
- (506) Larger schemes like Whitlingham (12% of total allowance) and Bedford (7% of total allowance) cannot be managed without a change control process, especially given external pressures like supply chain constraints and evolving regulatory standards. Anglian's latest costs estimates for these schemes are now significantly higher. Growth scale and location are notoriously difficult to predict.
- (507) Therefore, scheme-level PCDs should be included in the change control process, with companies required to justify why programme-level flexibility could not absorb the relevant impact, particularly when seeking changes to completion dates.

8.1.2 Materiality threshold should only apply in certain circumstances

- (508) Ofwat proposes a 0.5% totex threshold for change control requests to ensure proportionality and focus on the largest changes. While filtering out minor changes is reasonable, a rigid threshold risks blocking recovery of efficient costs and hindering support for broader government goals like housing and economic growth.
- (509) There's a tension between the detailed control Ofwat applies through PCDs and its aim to reduce administrative burden. With many WINEP actions likely to be included, a strict materiality test could lead to misalignment with quality regulators at a time when a more integrated regulatory approach is being called for.
- (510) Anglian consider that the threshold should not apply when:
- (i) The change involves scope or output;

(ii) The revised scope delivers equal or greater customer or environmental benefit; and

(iii) The relevant quality regulator has approved the change.

(511) In such cases, Ofwat's role should be limited, and the request should be fast-tracked. Anglian proposes an alternative decision-tree that distinguishes between fast-tracked and full-review requests based on clear criteria.

8.1.3 Process for making PCD change control requests should be more flexible

(512) There is a tension between Ofwat's detailed control via the PCD framework and its aim for a proportionate change control process. Striking the right balance is essential to give companies clarity on obligations, which directly affect how they engage their supply chains.

(513) Internally, water companies manage change control frequently - often weekly - because decisions impact design, development, and costs. Ofwat's proposal for a single annual change window (January, with responses by April) risks exposing companies to prolonged regulatory uncertainty. For example, a change made in May could remain unresolved until the following April, leading to decision paralysis and inefficient spending to keep multiple options open.

(514) This level of regulatory risk is not seen in other UK utility sectors. To mitigate it, Anglian proposes a quarterly change control process, with:

(i) Fast-tracked requests responded to within one month;

(ii) Full assessments completed within three months.

8.1.4 Mains renewal PCD requires further clarification

(515) Anglian welcomes Ofwat's clarification that companies can revisit the mains cohorts included in CW20 submission. In its view this is not apparent from reading the FD Price Control Deliverable¹¹⁸ guidance and Anglian

¹¹⁸ Ofwat, PR24 final determinations: Price control deliverables appendix (February 2025) (See [here](#)).

would welcome this clarification being added and communicated to the sector.

Chapter F

Investability and Financeability

9 Introduction

(516) Anglian welcomes the recognition in the PDs that the FD failed to correctly assess the cost of capital, such that the notional company was underfunded and unable, in particular, to attract the new equity needed to finance its investment programme. It also supports that the framework for assessing investability and financeability should “*consider the evidence in the round*”, remain as simple as feasible, and balance the benefits of “*predictability*” whilst evolving with the evidence (PDs, ¶7.17). This mirrors the Independent Water Commission’s finding that the regulatory framework needs to be “*simpler, less aggressive, more predictable, more realistic and easier for investors to understand and forecast*”.¹¹⁹

(517) The cost of capital continues, however, to underestimate the investability and financeability challenge at PR24. Anglian believes that the following changes are needed for the RD to correctly balance risk and return so that the notional company can attract the right level of investment at this critical juncture for the sector.

(518) First, as set out in Anglian’s SoC, the cost of equity should, at the very least, be increased to the top of the CAPM range so that the price control is an investable proposition.¹²⁰ While Anglian welcomes the PDs’ reappraisal of the cost of equity and significant shift towards a workable return for investors, the PDs do not fully address the challenge. There is every reason to set a cost of equity at the top of the CAPM range:

- (i) It is supported by several intuitive cross-checks. Contrary to the PDs (PDs, ¶7.539-7.542), cross-check evidence is both an indispensable tool for determining the point estimate and a method for evaluating the robustness of CAPM at PR24. All models have methodological

¹¹⁹ Independent Water Commission, Final Report (21 July 2025), p. 216 (see [here](#)).

¹²⁰ Anglian notes that the CMA has already committed to updating the cost of equity and debt to reflect market data until the end of September 2025.

strengths and weaknesses (including, as the PDs acknowledge, CAPM; see PDs, ¶7.413). Where simple cross-checks provide relevant information, the redetermination cannot ignore them; it should assess the weight to be attributed to such evidence. And where the cross-check evidence points towards a cost of equity above CAPM, the CMA should take this into account when setting the point estimate.

- (ii) This is all the more important here, since the PDs' approach to inflation, through the inclusion of a 0.4% CPIH-CPI wedge, means that it overestimates the spread between equity and debt and thus the relative attractiveness of the cost of equity for investors. Setting the point estimate at the top of the CAPM range and removing the CPIH-CPI wedge assumption would instead lead to a spread of 187bps (more aligned with Anglian's SoC), which would more convincingly signal to investors a pathway towards the estimated required spread of 250bps discussed in the hearings. This point is reinforced by updating the ARP-DRP analysis: the PD cost of equity of 5.9% aligns only to the implied cost of equity of SVT and UU. It is clear that the cost of equity for the notional company should be higher (and Oxera's analysis finds that the average cost of equity implied by eight water companies' bonds (including SVT and UU) is 6.43% up to end-June 2025 data).
- (iii) It is also driven by the significant shift in the level of investment required not only in AMP8 but also in future AMPs. The PDs recognise the "*period of sustained high investment for multiple future AMPs*" (PDs, ¶7.548(b)) but fail to draw the right conclusion: the low-risk low-return investors, such as pension and infrastructure funds, that the industry hopes to attract will not invest unless they can attain a return commensurate with not seeing net cash returns for an uncertain period of time. Because the PDs do not properly consider the composition and needs of investors in assessing investability, they misunderstand the essence of the investment challenge: the

point is not whether investors can defer payment of dividends, but whether the overall cashflows available to investors over future AMPs are sufficient to attract investment from low-risk low-return investors in this AMP. It cannot be the case that the cash flow for dividends comes from additional equity investment. And the notional company will not produce sufficient cashflows to pay dividends without debt issuance that would force the notional company above the notional gearing. The point is that the limited cash flow returns in future AMPs illustrate why the cost of equity is too low now.

- (iv) The framework for returns at PR24 must be sufficiently attractive to convince investors to put in new equity capital in circumstances where investor confidence in the sector is at record lows, as also reflected in the Independent Water Commission's report and recognised by credit rating agencies.¹²¹ As Ofwat recognised in its FD, there is a compelling case for setting the right cost of equity to overcome investor scepticism of the regulatory regime over the last five years and set the ground for adequate returns over a 25-year time horizon.¹²²

(519) There is also no reason why the top of the CAPM range is not likely to be the right cost of equity in this case. The PDs claim that the risk of underinvestment is mitigated because existing investors can be compelled to accept underfunding through statutory requirements and service delivery incentives (PDs, ¶7.549(a - b)). But this is hardly in keeping with an investment-friendly regime, let alone one that seeks to attract material new investment. It implies that existing investors have no choice but to invest, since they risk losses to their existing investment. This logic favours short-

¹²¹ Independent Water Commission, Final Report (July 2025), Chapters 4 and 5 (see [here](#)). See e.g. S&P Global Ratings, U.K. Water Regulatory Framework Support, Low Financial Flexibility in Coming Regulatory Period Drive Rating Actions (February 2025), page 4 (see [here](#)). And similarly, Moody's also downgraded its view on the stability and predictability of the regulatory regime following the FD.

¹²² Ofwat, PR24 final determinations: Aligning risk and return - allowed return appendix (19 March 2025), page 8 (see [here](#)).

term gain over long-term harm to the sector and the robustness of the regulatory regime.

(520) Second, the PDs' conclusion that long-term CPIH should be assumed to be 2.4% by including a CPIH-CPI wedge of 40bps as forecasted by the OBR fails the CMA's own test that it should consider the evidence "in the round". Anglian would not dispute that the long-term CPIH forecast could theoretically differ from the Bank of England's long-term inflation forecast, if that reflects economic reality. But the CPIH-CPI wedge is informed by the selective application of a single long-term forecast, which is not supported by the evidence:

- (i) Analysis of historical data not only does not support the existence of a systematic CPIH-CPI wedge, but instead shows a negative wedge over most long-term averaging windows, as Oxera's analysis demonstrates. In reality, the OBR-forecasted wedge is statistically a significant outlier.
- (ii) The OBR forecast is also highly sensitive to a number of assumptions, namely that (i) owner-occupier housing costs ("OOH") grow on a one-to-one basis with average earnings and (ii) OOH and council tax exceed CPI inflation over the long term. Underpinning these assumptions is a productivity growth forecast which cannot be corroborated by empirical observations and is subject to significant subjectivity. In fact, the forecasted labour productivity growth of 1% or above from 2028 to a long-run estimate of 1.5% in 2037 is in stark contrast to the evidence: there has been no single five-year period of such growth since before the 2008 financial crisis.
- (iii) The OBR itself has recognised that "*limited confidence [...] should be placed in our central forecast given the scale of shocks that inevitably drive a wedge between any central predictions and subsequent outcomes*".¹²³ The expected review of the OBR forecast is widely expected to result in a complete reversal on the productivity

¹²³ Office for Budget Responsibility, Forecast evaluation report (July 2025), page 2 (see [here](#)).

assumption, which would practically remove any residual footing for the PDs' wedge.

- (521) Third, while the PDs CAPM model contains welcome assessment and adjustment of the TMR and beta, it continues to underestimate the cost of equity.
- (522) Despite the existence of empirical evidence supporting the presence of a convenience yield for nominal bonds across tenors, based on updated analysis by Oxera, the PDs ignore the practical reality that even the most creditworthy institutions cannot borrow at levels equivalent to index-linked gilt yields. The CMA should recognise that a realistic RFR must sit above the ILG yield, as was recognised at PR19, and that the evidence and economic circumstances continue to support the PR19 redetermination approach to RFR estimation. While the beta range has been correctly informed by the inclusion of Pennon in the PDs dataset, the CMA should acknowledge that the beta estimate still downplays the risk in the sector by appropriately aiming up.
- (523) Anglian notes for completeness the ongoing volatility in market data, and in particular in Risk Free Rates. It is important for investors that the data cut-off points used in the RD reflect a fair and transparent picture (whether they result in higher or lower rates) and, therefore, Anglian believes that the CMA should continue to target using the September 2025 dataset to inform the cost of capital estimates.
- (524) Finally, the PDs understate the level of risk in the overall package, by assuming that any downside skew on ODIs will be balanced out by a positive skew on financing. This is incorrect, as it (i) fundamentally relies on an assumption of inflation outperformance that is inconsistent to the CMA's long-term inflation assumption; and (ii) discards the level of risk still inherent in the package, notably in the significantly lower base allowances nor the additional risk that inherently stems from the management of large capex programmes.

(525) The remaining risk in the package should be addressed “at source” in the various areas explored in this document or, where that is not possible, by sufficient “aiming up” on the cost of capital.

(526) This chapter is structured as follows: Section 10 sets out why the RD should aim up to the top of the CAPM range; Section 11 explains why the PDs are wrong to include a CPIH-CPI wedge; Section 12 sets out the necessary changes to the CAPM; Section 13 addresses the imbalance of the risk in the package; Section 14 discusses the necessary changes to the cost of debt; Section 15 sets out the directional shift required on financeability; and Section 16 addresses the Retail Margin Adjustment.

10 The consistent application of a robust investability and financeability framework necessitates aiming up to the top of the CAPM range

(527) While Anglian welcomes the recognition in the PDs that the FD failed to correctly assess the cost of capital and the importance of ensuring the investability of the price control (PDs, ¶8.313), the PDs fail to match the industry need for investment when settling for a partial aiming up within CAPM.

(528) Where the PDs fall short is a sufficiently robust assessment of investability, which Ofwat “*has a duty to support*”, as the Independent Water Commission recognised.¹²⁴ Investability requires testing whether: (i) the FD assumptions underpinning the necessary equity investment and sufficiency of distributions to investors are robust, not only for AMP8 but also the long term, and the allowed return is supported by a correctly calibrated CAPM and comprehensive additional cross-checks; (ii) the FD allows Anglian on a notional basis to achieve a rating comfortably above the BBB/Baa2 cash lock-up threshold under the licence; and (iii) the FD is a “fair bet” based on an unembellished view of the overall balance of risk and return resulting from decisions on the various building blocks, notably base and enhancement allowances and ODIs, as well as the cost of capital (SoC, ¶660).

¹²⁴ Independent Water Commission, Final Report (July 2025), p. 16 (See [here](#)).

(529) The PDs expressly seek to address the investability of the price control, concluding that the cost of equity is sufficient since, in particular, the CMA has “*assessed the allowed return afresh*” and satisfied itself “*that the package is broadly balanced*” (PDs, ¶8.314). Where the PDs fall short is holistically testing investability. Instead, the PDs conclude that “*a modest degree of aiming up on the cost of equity*” is likely to benefit customers due to the “*relatively unique circumstances of the price control*” (PDs, ¶7.552). Modest aiming up is not sufficient here.

10.1 The PDs still underestimate the investability challenge and the cost of equity needed to address it

(530) Anglian welcomes the CMA’s decision to apply evidence from equity spread over debt cross-checks to inform its point estimate cost of equity. However, Anglian is concerned that the PDs have not captured the full picture of the investability challenge faced by the sector by (i) still adopting an unnecessarily narrow approach to the role of cross-check evidence; (ii) misinterpreting the challenge presented to investors in terms of net cash returns; and (iii) not appropriately engaging with investor sentiment.

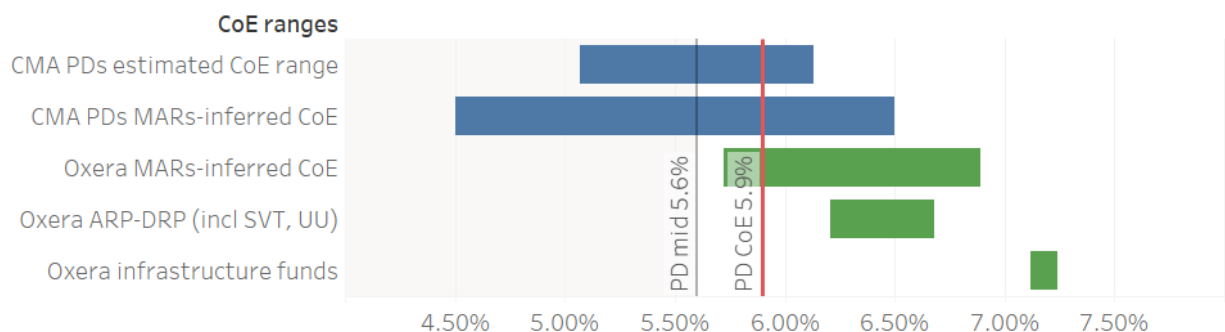
10.1.1 The PDs adopt an overly narrow approach to the use of cross-checks

(531) While Anglian agrees with the need to avoid unnecessary complexity in the determination of the price settlement, the PDs discard a number of simple, market-based cross-checks, notably ARP–DRP and listed infrastructure fund required returns, without robust reasoning (PDs, ¶¶7.482-7.494; 7.525-7.533). The use of intuitive, simple cross-checks is a valuable and necessary tool to test the robustness and address the known shortcomings of the CAPM (contrary to PDs, ¶7.539). The PDs recognise these shortcomings but conclude they need not “*explicitly take them into account*” (PDs, ¶7.416). Anglian’s point is not that this should call into question the use of CAPM but that the CMA cannot ignore these shortcomings when setting the cost of capital. This is all the more so since these cross-checks test CAPM on different bases (debt and equity) and bring the model closer to market realities. The PDs instead risk adopting a binary approach to the

relevance of such evidence, which ignores the need to be proportionate, recognising the pros and cons of all of the evidence on the table.

(532) Had the PDs fully engaged with the cross-check evidence, they would have recognised that a number of straightforward, market-based checks support a cost of equity at least as high as the top of the PDs' CAPM range, as shown in Figure 23. In fact, basic cross-checks (equity v debt spread, ARP-DRP, and infrastructure funds) indicate that the cost of equity is at the top of the PDs' CAPM range, or more likely, above the current range.

Figure 23: Range of cross checks¹²⁵



(533) In relation to the debt-equity spread, Anglian welcomes the CMA's recognition that "*comparing expected returns to debt and equity investors can be a helpful sense check on the allowed return on equity*" (PDs, ¶7.468). As the PDs acknowledge, the gap between the cost of equity and debt was "*relatively narrow*" in its findings, especially in the lower half of the CAPM range, implying a midpoint cost of equity spread of 174bps over the cost of new debt (PDs, ¶7.480). The PDs concluded that a point estimate above the midpoint would therefore be necessary (PDs, ¶7.481). However, under the PDs point estimate, the spread of equity over debt remains low, implying a spread of 204bps. Importantly, these spreads are overstated, since the assumption of a CPIH-CPI wedge artificially reduces the cost of debt. If this wedge is removed, the PDs point estimate would

¹²⁵ Oxera MAR's-inferred CoE is to the cut-off of end-June, based on lower bound assumption of 1% RoRE outperformance, and upper-bound assumption of 2% RoRE outperformance. Oxera infrastructure funds analysis as presented in Anglian SoC. Oxera ARP-DRP analysis updated to include SVT and UU as requested by the CMA (PDs, ¶7.493), providing a range of 6.21–6.68% to the cut-off of end-June 2025.

spell a spread of 164bps, well below what it had already considered as narrow. Therefore, setting a point estimate cost of equity at the top of the CAPM range would create a more sustainable spread of 187bps, which aligns to Anglian's SoC estimate as a sufficiently acceptable level of return for AMP8.

- (534) The evidence from listed infrastructure funds also supports a higher cost of equity. The PDs' rejection of the use of infrastructure funds required returns is based on the purported wide range of returns making it "*difficult to draw conclusions to inform our selection of a cost of equity point estimate*" (PDs, ¶7.532). This conclusion does not hold as the width of the range of returns is attributable to simple error by Ofwat. The Disputing Companies' joint response to Ofwat explained this. Once correctly adjusted for the share prices of these funds trading at discounts to the NAVs, the implied range for the return on equity is narrowed and provides useful information regarding investor expectations of returns applicable to the UK water sector. Figure 23 illustrates the point. The range provided by the infrastructure funds assessment is, in fact, significantly narrower than the indicative range provided by other cross-checks. This is another sign of the PDs overly narrow approach to the use of cross-checks: clear and intuitive cross-check evidence suggesting that investors require a cost of equity outside of the CAPM range provides valuable insight into the robustness of the CAPM model and should not simply be ruled out.
- (535) Oxera's ARP–DRP analysis lends further weight to the evidence from the debt-equity spread and infrastructure funds. The ARP–DRP methodology is a logical extension of the intuitive analysis of the spread between debt to equity that seeks to better inform the estimation of the cost of equity based on debt market evidence. Despite its endorsement in principle by Ofwat's adviser Professor Mason during the Risk & Return hearing, the PDs reject the use of ARP–DRP on the grounds that it does "*not place much weight on Oxera's arguments relating to linear extrapolation provided a minimum bound [for the allowed return on equity]*" (PDs, ¶7.490) and concludes that ARP–DRP does not provide a "*strict lower bound on the allowed return on equity*" (PDs, ¶7.494).

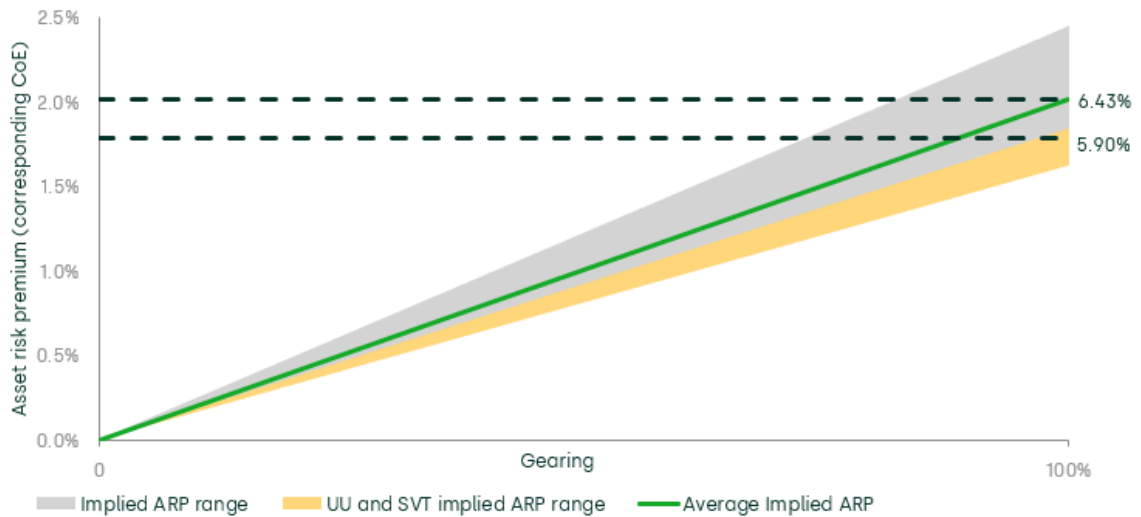
(536) The PDs' critique does not hold for several reasons.¹²⁶ Most importantly, Oxera's linear extrapolation presents a conservative picture of the spread. Hence, Oxera's ARP-DRP, if anything, underestimates the likely cost of equity.¹²⁷ However, the CMA does not need to believe that ARP-DRP provides a "*strict lower bound on the allowed return on equity*" (PDs, ¶7.494) for the analysis to be informative for setting the cost of equity. As illustrated in Figure 24, the analysis points to a cost of equity at the top, if not more, than the PDs' CAPM range. The analysis is thus compelling evidence that the cost of equity should be materially higher than under the PDs, irrespective of whether it should be determinative of setting the lower bound.

Figure 24: Water company ARP-DRP extrapolation and corresponding level of cost of equity

¹²⁶ This is because a linear extrapolation is likely to underestimate the risk premium since, in reality, it is a function of the level of gearing in a company. In any case, the PDs mischaracterise the data points used for linear extrapolation as being subject to "significant uncertainty" (PDs, ¶7.490). In fact, the starting point of the extrapolation (at the origin of the DRP curve) is based on the theoretical fact that when the value of debt is zero, the probability that the value of a company's debt exceeds the value of the company is therefore also zero (Oxera, 2024, 'Evaluation of the ARP-DRP framework', 8 Nov). Second, the DRP curve is adjusted for expected loss; as such, the statement that the first tranche of debt issued by ungeared companies is priced at the RFR is incorrect. Third, the extrapolation is done on an individual company basis, based on the observed level of gearing and fixed debt yields. As a result, ARP-DRP presented in Anglian's SoC allows the estimation of an implied cost of equity for each of the eight companies in the sample.

¹²⁷ Oxera (2024), 'Evaluation of the ARP-DRP framework', 8 Nov.

Water company ARP–DRP extrapolation and corresponding level of cost of equity (30 June 2025)



Note: the extrapolation illustrates the range of ARP implied by the observed fixed debt yields of water companies (excl. TMS and SRN); horizontal lines represent a level cost of equity implied by a given ARP using the CMA PR24 PD CAPM parameters; UU and SVT implied range also includes AFW.
Source: Oxera analysis.

(537) Finally, Anglian agrees with the PDs that the analysis cannot solely rely on SVT and UU bonds. Applying the ARP–DRP framework evidence, the PDs cost of equity (5.9%) is broadly equal to the cost of equity implied only when considering SVT and UU. However, neither of these companies corresponds to the concept of the notional company, and therefore the cost of equity implied by their bonds will not be sufficient. This is illustrated by Figure 24 above, which shows that taking into account a wider set of companies – and hence a better view of the likely notional company – results in an indicative cost of equity of approximately 6.43% (based on the data as up to 30 June 2025).

10.1.2 The PDs’ net cashflows to investors analysis does not address the long-term investment challenge faced by the sector

(538) The PDs do not properly grapple with the implications of the long-term investment challenge for setting the cost of equity today. The practical reality is that the sector is no longer an attractive investment proposition for the low-risk, low-return, long-horizon investors with which it has historically engaged: in a higher risk environment, such investors not only have to bear the cost of time but are also exposed to uncertainty as to

whether and when their returns will materialise. In this context, the cost of capital needs to be higher to reflect the impact of the long-term profile of returns on equity decision-making today.

(539) The PDs mis-characterise this practical reality by simply pointing to the fact that “*it is not reasonable for equity investors to expect short (ie within 5 to 10 years) ‘payback’ periods*” (PDs, ¶8.303). But this misses the point. Anglian is not challenging the fact that in periods of high investment, it is reasonable for investors not to see a full return in cash on their investment over the short term. Its point is that the cash returns are still insufficient vis-à-vis what investors are likely to need to attract sufficient equity investment in the price control. It would be unreasonable for low-risk investors, such as pension and infrastructure funds, to make recurring cash injections, without a clear or sufficient cash returns profile, and with an uncertain long-term return: that requires investors with a fundamentally different risk appetite. The PDs’ mistake is to avoid thinking about whether the returns on offer are sufficient to attract investors with the right profile, in particular whether the cash returns profile flowing from the cost of equity is sufficient to entice existing investors to commit further equity and to attract new investors.

(540) This assessment is essential because investors in the notional company can no longer safely assume positive net dividends, i.e., cash returns net of fresh equity injections. The profile of the notional water company is changing. This is unrelated to dividend policy: neither of the PDs’ suggestions that (i) equity injections can be scaled up to finance dividends for existing investors, and (ii) investors can forego immediate cash returns by reinvesting to increase future value, are credible as explained in Anglian’s post hearing submission.¹²⁸ This is likely to be the case over successive AMPs. It also has nothing to do with “payback periods”, as explained during the Risk & Return hearings.¹²⁹ While a low-risk, low-return investor may reasonably accept low or negative net cash returns for a five

¹²⁸ Anglian Water: Post Hearing Submission, page 1.

¹²⁹ R&R, Day 2 hearings, line 4 page 77 to line 17 page 78.

or 10-year period of heavy investment, it would be unthinkable for any investor to accept such a proposition for longer periods when there is inherent uncertainty on the ultimate level of return (which remains dependent on future regulatory settlements and the performance of the notional company over a much longer timeframe).

(541) It is for this reason that Anglian proposed that the CMA provide signalling vis-à-vis the expected future evolution of the cost of capital. The PDs reject that (PDs, ¶8.301). But they also fail to properly recognise that the long-term risk associated with the investment profile has consequences for AMP8's cost of equity.

10.1.3 The PDs do not engage fully with investor sentiment

(542) The PDs should give greater weight to investor sentiment. The PDs acknowledge that *"Ofwat itself ... formed a view that the overall investor sentiment towards the sector is low"* (PDs, ¶7.551). Given the regulatory demand for long-term investment, and hence deferral of returns, it is all the more important that PR24 provides a sufficiently clear signal of the investability of the price control and the robustness of the regulatory framework. Otherwise, the sector risks being underfunded with the negative consequences which flow from such an outcome.

10.2 There is no basis for failing to pick a point estimate at the top of the CAPM range at PR24

(543) The PDs recognise that the "step change" in the level of investment and the deleterious welfare consequences of underinvestment support the case for aiming up (PDs, ¶7.547 – 748). The PDs, however, also claim that the risks of underinvestment are addressed by the statutory requirements and service delivery incentives (PDs, ¶7.549), as set out in the UKRN's guidance. The gist of this is that existing investors are incentivised to invest – irrespective of the level of return – because they otherwise risk licence removal or seeing their investment whittled away in penalties for underperformance. This is simply not credible. It implies forcing existing investors to invest at lower returns than the cost of capital. This is not feasible in periods of high investment. But even if it were possible in the

short-term, this has long-term detrimental consequences that would undermine the credibility of the regulatory regime and harm customers in the long-run, as investors would demand higher rates of return to protect themselves against the risk of UK regulators seeking to impose settlements below the cost of capital in future price controls. Or investors would simply not invest at all.¹³⁰

(544) Anglian also agrees with the PDs that “aiming up” should “*not be the default position*”, but this cannot mean that the CMA applies a presumption in favour of not aiming up (PDs, ¶7.550). The CAPM range is intended to provide a plausible range for the cost of equity. The assessment of the point estimate must therefore be conducted “in the round”, based on the robustness of CAPM for estimating the cost of equity, the balance of evidence from the cross-checks and the overall context of the price control - including, but not limited to, the intensity of the investment profile and investor sentiment. Here it is clear there is evidence that CAPM may underestimate the cost of equity, including cross-check evidence which points to a significantly higher cost of equity than even the top of the CAPM range and a range of circumstances that mean it is particularly important to ensure the cost of equity is sufficient to attract investment. A modest “aiming up” from the middle of the CAPM range for the cost of equity is thus manifestly insufficient.

10.3 The residual imbalance of risk in the price control requires further “aiming up”

(545) Finally, the remaining asymmetry in the PDs package means that the redetermination should “aim up” to address such risk. The PDs state that “*skew in the package should be dealt with ‘at source’*” and the “*overall package is broadly balanced*” (PDs, ¶7.559). While Anglian agrees that asymmetry in a price control’s risk profile should be dealt with at source in

¹³⁰ The PDs also claim that investment is incentivised by “*separate treatment of large one-off projects*” (PDs, ¶7.549(c)). Whether or not such mechanisms incentivise investment in specific projects, they are irrelevant for ensuring investment in the notional company. The claim instead implies that companies would be compelled to use such mechanics to address a settlement below the cost of capital irrespective of whether the relevant mechanic is efficient or in the best interests of customers.

the first instance, aiming up is necessary where it is not, or cannot, be addressed at source. As explained in this submission and below, the PDs significantly understate the level of risk in the package (notably arising from the provisional decisions on base, enhancement, ODIs, and reflecting an inflation assumption which includes a 40bps CPIH-CPI wedge) and its implications for the cost of equity. Some of this risk is effectively impossible to address at source. Accordingly, Anglian submits that the RD should make an allowance for “aiming up” to the top of the CAPM range to address the residual risk in the package and, absent further corrections to the overall balance of risk, further “aiming up” to address any additional asymmetric risk.

11 The PDs 2.4% inflation assumption is not supported by evidence and further undermines investability and financeability

(546) The PDs decision to apply a long-term CPIH inflation assumption of 2.4% based on a 40bps CPIH-CPI wedge estimated by the OBR is also wrong. This error impacts on companies’ ability to recoup efficiently incurred debt costs and overstates the spread between the returns of debt and equity (which contributes to the PDs underestimating the cost of equity).

(547) Alongside this submission, Oxera has prepared a paper explaining in more detail the shortcomings in the PDs’ approach to inflation.

11.1.1 The selective introduction of a CPIH-CPI wedge at PR24 does not flow from a proper consideration of evidence “in the round”

(548) The PDs conclude that it would be inappropriate to exclude the OBR’s CPIH estimate since it is the OBR’s “*latest forecast*” and the PDs take “*into account updated data for other parameters*” (PDs, ¶7.49). But this is not the salient issue. While the cost of capital methodology must indeed evolve with the evidence, the question that the CMA should ask itself is whether the OBR estimate is sufficiently robust to be solely relied upon in the face of longstanding regulatory precedent and evidence supporting that neither CPI nor CPIH has tended to be consistently higher than the other, and that

any difference is small. The same observation was made by Ofwat in its FD and response to company statements of case.¹³¹

(549) This is especially important given the CPIH-CPI wedge is fundamentally different from the RPI-CPI wedge. Whilst the RPI-CPI wedge arises from structural differences between the RPI and CPI definition and methodologies, the CPIH-CPI wedge is dependent on assumptions underpinning specific component forecasts and is, therefore, inherently more subjective than any RPI-CPI wedge. In addition, the OBR itself has pointed out its methodology remains under review, creating a risk that the assumptions underlying the redetermination package may be subsequently overturned (similar to the adoption of the ONS backcast of CPIH inflation for 1900-1988 at PR19).¹³²

(550) In light of this, the CMA should have exercised additional caution before choosing to selectively rely on an estimate that has not been critically reviewed during the PR24 process and did not factor in the FD. This was noted by Ofwat itself, in highlighting the need to consult on its implications, for which available time was insufficient (Ofwat Response to common issues R&R, ¶1.64). The practical effect is that the PDs are ignoring the longstanding regulatory approach based on evidence that any wedge is small and transient, in favour of an approach based on a single OBR forecast which the body itself points out remains under review.

11.1.2 The OBR forecast has a number of weaknesses which mean that any CPIH-CPI wedge is significantly lower

(551) Even if the CMA believes it is appropriate to calculate and use a CPIH-CPI wedge, the OBR-estimated 40bps wedge suffers from a number of errors meaning that it is not sufficiently robust to be relied upon in the redetermination.

(552) First, the OBR-estimated CPIH-CPI wedge is unsupported by historical evidence. Using data from 1989 to September 2025, Oxera finds that

¹³¹ Ofwat (2024), 'PR24 final determinations Aligning risk and return – allowed return appendix, December, p. 130; Ofwat (2024), 'PR24 redeterminations – risk and return – common issues', May, para. 1.63.

¹³² Office for Budget Responsibility, The long-run difference between RPI and CPI inflation (see [here](#)).

outturn data points to any wedge not being systematic, and across all long-term averaging windows, to any wedge being small. Across long-term averaging windows up to 20 years, any wedge is negative—indeed, the 20-year average to September 2025 shows a wedge of -0.11%. Significantly, the OBR’s estimated wedge is a firm outlier—across all historical data, any wedge has only met/exceeded the 40bps estimate 13% of the time. Across the 10- and 20-year averaging windows, the OBR estimate sits in the 90th to 95th percentile. The OBR’s long-term wedge forecast therefore cannot be reconciled with historical evidence.

- (553) Second, the OBR’s wedge forecast is reliant on two key assumptions, (i) that OOH costs will grow on a one-to-one basis with average earnings, and (ii) that OOH and council taxes will grow at a rate nearly double that of CPI. Analysis of historical data however shows that neither of these assumptions are credible. In the first instance, rental inflation (which underpins OOH costs) has only grown by c. 0.6 times the rate of earnings since 2009, while OOH costs have grown at a slower pace than CPI since 2000.
- (554) Finally, the OBR’s wedge forecast results from a systematic tendency to over-estimate future productivity growth, which in turn drives earnings growth and OOH forecasts. Many parties, including the OBR itself, have pointed to this, with the OBR stating that “*successive past forecasts for trend productivity have proven too optimistic*”¹³³. Despite this however, the OBR’s current productivity forecast underpinning the 40bps wedge remains optimistic, predicting a level of growth that has not happened since before the financial crisis.
- (555) It is also widely expected that the OBR will downgrade its productivity forecasts for the period to 2030 in November, which will also have a reductive impact on the longer-term forecast.¹³⁴ Once corrected, the OBR’s CPIH-CPI wedge assumption will thus decrease significantly, all else

¹³³ Office for Budget Responsibility (2025), ‘Alternative Scenarios for trend productivity’, March, accessed: <https://obr.uk/box/alternative-scenarios-for-trend-productivity/>.

¹³⁴ See for example: [Reeves faces £20bn hit to UK public finances from productivity downgrade](#).

equal. That this will almost certainly occur and render the OBR's CPIH-CPI wedge defunct vividly illustrates why the RD should not rely on it.

(556) For these reasons, Anglian considers that the OBR forecast of a long-term CPIH-CPI wedge of 40bps fails to meet the crucial robustness threshold for use in regulatory determinations and invites the CMA to re-examine the use of this estimate in the RD.

12 A robust cost of equity methodology supported by varied cross-checks shows that the cost of equity should be higher

(557) The PDs make a number of corrections to the calibration of CAPM for the cost of equity but there remain a number of assumptions that are not well-founded.

12.1 The RFR still needs to reflect that even the most creditworthy institutions cannot borrow at levels equivalent to index-linked gilt yields

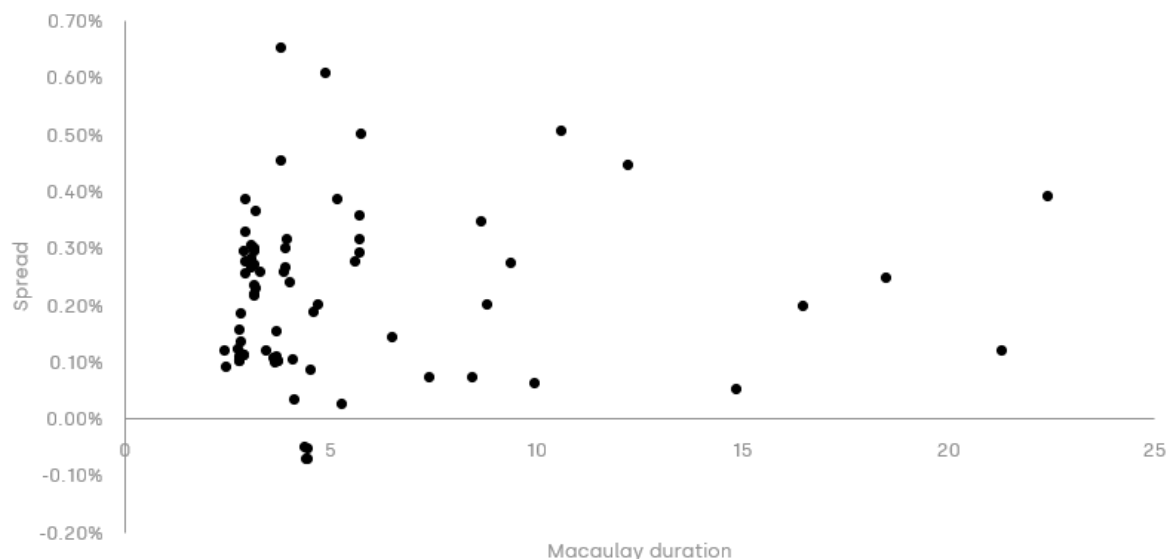
(558) Whilst the CMA acknowledges the extensive empirical evidence on existence of a convenience yield (“CY”) for nominal bonds with short tenors, the PDs ultimately reject its application due to the difficulty in estimating this for longer tenors with precision (PDs, ¶7.176). This departs from the PR19 re-determination, where the CMA estimated the RFR by reference to the average of the yields on ILGs and AAA-rated non-government bonds (PR19 FD, ¶9.162), concluding that “...[ILGs] are unlikely to provide a perfect (or wholly) sufficient proxy for the RFR in isolation” (PR19 FD, ¶9.108) and that “the appropriate RFR for our CAPM is likely to sit above the ILG yield...we consider it unlikely that the yield on ILGs is a perfect representation of a theoretical RFR” (PR19 FD, ¶9.264). Despite these clear statements and the recognition that a CY does exist, the PDs discard this entirely from the RFR build-up without providing any evidence for this approach, other than a general reference to changes in financial circumstances since 2020 (PDs, ¶7.179).

(559) Oxera analysis demonstrates that the premise of the CMA's analysis is wrong.

- (560) First, contrary to Ofwat's critique of the inclusion of AAA bond yields, a key benefit of the PR19 approach is that it minimises the asymmetric risk of systematically underestimating the 'true' RFR by sole reference to ILGs, as the CMA itself highlighted in its PR19 RD (*"...the appropriate RFR for our CAPM is likely to sit above the ILG yield...we consider it unlikely that the yield on ILGs is a perfect representation of a theoretical RFR."*, PR19 FD, ¶9.264). Therefore, there is no clear reason why the PDs should choose not to be informed by AAA bond yields.
- (561) Second, (i) once duration-matched, a consistent positive spread is observed between AAA bonds and gilts whether over a 1-month, 1-year, or 5-year observation period and (ii) this spread is consistent and persistent at the 10- and 20-year durations, as illustrated by the spread of AAA bond yields to the nearest duration-matched nominal gilt in Figure 25 below. Actual bond evidence clearly sets out that a spread persists at longer durations, including at the 10–20-year durations relevant for the PR24 CAPM specification, with an average spread of 21bps over the closest gilts across all time series to a cut-off of September 2025. This provides further support to the average CY estimate of 24bps submitted in Anglian's SoC.

Figure 25: Spread between AAA bonds and duration-matched nominal gilts

Spread between AAA bonds and duration-matched nominal gilts, one-month average to September 2025



Note: The bond sample is based on 75 coupon-paying bonds from iBoxx GBP AAA indices with maturity of over 3 years, excluding all collateralised issuances. All bonds are matched to the nearest actual nominal gilt by Macaulay duration.
Source: Oxera analysis based on Bloomberg and Capital IQ data.

(562) This shows that the CMA observation that warranted its PR19 approach (“...it is not necessary to explain why government bond yields may be lower than other high-quality bonds, as there is evidence that they are lower in practice.”, PR19 FD, ¶9.92)) remains valid in PR24. It is therefore not clear why the PR19 RFR approach is evidentially less reasonable now, as proposed by the CMA (PR19 FD, ¶7.179, 7.204), especially when the evidence continues to show that the government can borrow at lower rates than even the highest-rated private investor.

(563) Third, Anglian rejects that any adjustment for this spread is a "subjective" adjustment to observable market data, in contrast to the observable ILGs (PDs, ¶7.181). This wrongly conflates ILGs with the RFR: the point is that ILGs are not a perfect proxy for the RFR. Hence why an adjustment, itself derived from observable market data, is needed to ensure that the RD uses the most accurate proxy. The CMA’s PR19 final re-determination position provides a valid precedent in this respect (PDs, ¶9.263).

(564) Finally, Anglian submits that the 5bps difference found by the PDs in applying the CMA's approach at PR19 instead of the PDs approach is material, especially as any difference will be relevant to the CMA's RD once updated for data to the end-September cut-off.

(565) In light of this evidence, it is clear that the ILG underestimates the RFR across all reasonable duration periods. The RD should accordingly either retain the PR19 approach by considering AAA bond evidence or making direct adjustments to the RFR as captured in Anglian's SoC, in order to avoid systematically underestimating the 'true' RFR.

12.2 The PDs have rightly included Pennon in the beta but should recognise that it still underestimates the true beta

(566) The PDs' recognition that it is appropriate to include Pennon in the beta is well founded: (i) whilst Pennon has certain non-regulated activities, profits generated by those are negligible and do not constitute a sufficiently good reason to exclude Pennon (PDs, ¶7.328); (ii) relatively 'clean' data to estimate a beta for Pennon is available from the end of March 2022 (PDs, ¶7.331); and (iii) more data points to compare with the notional company is better than fewer (PDs, ¶7.332). The CMA's decision to consider evidence from shorter-term three-year betas, which facilitates the inclusion of Pennon, excludes the Covid-19 period, and incorporates forward-looking risk likewise ensures a better proxy for beta (PDs, ¶7.431 (b)).

(567) The continued reliance on the betas of SVT and UU means, however, there is a continuing downwards bias in beta estimates, since both are outperforming companies. Even Pennon, which has forecast outperformance for PR24, is arguably in the upper half of performers in the water industry. While Anglian does not suggest that the CMA should redefine its beta methodology set out in the PDs, the relative risk of the comparator sample companies, compared to the risk in the sector, is a strong indication that beta values at the top of the range are likely to be more appropriate to reflect the investability challenges faced by the notional company in PR24.

12.3 The PDs TMR rightly recognises that a higher interest rate environment means a through the cycle approach is likely to underestimate the cost of equity

(568) The methodology adopted by the PDs is overall more robust than Ofwat's and, thus, results in a significantly more balanced outcome. This is notably the result of the CMA's express recognition of Anglian's SoC argument that a 'through the cycle' approach to the TMR may *"lead to an underestimate of the cost of equity at a time when the water sector needs to raise significant new capital to fund large investment programmes"* (PDs, ¶7.274) and that *"in practice there is likely to be some positive relationship between real interest rates and real returns on equity"* (PDs, ¶7.273). Anglian agrees that the risk of under-raising capital may be mitigated by the CMA's approach to give due consideration to Equity Risk Premium (ERP) evidence in calibrating the top end of the TMR range (PDs, ¶7.275-8).

(569) Further, the PDs preference for the simple 1-year arithmetic average in respect of the historical ex post approach is a positive step towards an intuitive solution (PDs, ¶7.241); equally, whilst the historical ex ante approach is considered as a "useful reference point", the CMA recognises there is some judgment involved in this aspect (PDs, ¶7.254).

13 The risk in the package needs to be fixed "at source" or balanced by appropriate aiming up on the cost of equity

(570) Anglian welcomes the PDs' approach of fixing areas of risk "at source", which overall has resulted in a more balanced package. It also welcomes the PDs' recognition that the ODI arrangements would give rise to a downside (design) skew for the notional company due to penalty only or one sided ODIs (PDs, ¶8.66).

(571) Anglian disagrees, however, with the PDs' conclusion that the ODI risk is offset by benefits from the financing aspects of the price control. This is almost entirely based on the conclusion *"that in principle some upward skew from inflation could be a reasonable assumption"* (PDs, ¶8.118).

Anglian submits that there are a number of fundamental flaws in the approach:

- (i) The provisional conclusion that there is a small positive skew on inflation risk is underpinned by a long-term inflation assumption of 2.0%, rather than the 2.4% otherwise assumed in the estimation of WACC. Not only is this assumption unsupported but it also double counts any CPIH-CPI wedge. Leaving aside the errors of the 2.4% inflation assumption, methodological consistency necessitates updating the analysis to reflect that inflation assumption, which only results in a negative skew on inflationary risk. This is exacerbated when updating for the new data cut-off of September 2025.
- (ii) The PDs also apply inconsistent thresholds to the assessment of different risks. On the one hand, the CMA sees *“some merit in Ofwat’s argument inflation risk is likely to be asymmetric as inflation can overshoot official targets by a wide margin but deflation is relatively rare”* (PDs, ¶8.113). On the other hand, however, the PDs discard the real-life evidence of previous overspend on totex allowances and, together with it, the presence of systematic risk of overspend (PDs, ¶8.33). But if historical realities are recognised for inflation, so should they be for totex allowances. This is also a simple intuitive point: large capex programmes typically increase the risk of overruns.
- (iii) The PDs analysis does not reflect the median implied by Ofwat’s inflation analysis and, therefore, does not capture the impact of the skew present in the inflation dataset. In reality, updating Ofwat’s analysis to June 2025 and for the 2024 long-term CPIH inflation assumption, results in a negative P50.

(572) The PDs also erroneously conclude that there is no negative skew associated with the new debt risk. In fact, an appropriately calibrated analysis updated to reflect the CMA’s cut-off would show a P50 of -10bps and therefore further supports the presence of negative skew. This is

derived on the basis of the majority of water sector bonds issued between November 2022 and June 2025 at Baa1 being issued with yields greater than that of the tenor adjusted benchmark iBoxx + 30bps. Importantly, these yield differentials can reasonably be expected to persist over AMP8, considering the rating agencies' downgrades of the regulatory framework, which are unlikely to reverse within the period, as well as the findings of the Independent Water Commission, which highlight a broad and persistent uncertainty in the sector that might take considerable time to be resolved.

(573) Overall, although the changes introduced by the PDs result in a better risk allocation for Anglian on a notional basis, the PDs (i) do not fully reflect on the remaining downside risk in the package that is largely driven by a negative skew on ODIs and financing; (ii) ignore the remaining uncertainty in PCDs (which remain dependent on final guidance expected to be published by Ofwat); and (iii) discard the material risk on totex arising from significantly lower base allowances. These factors all mean that, in reality, the notional company's risk exposure is much higher than the CMA assumed downside scenarios.

(574) Anglian submits that proper engagement with the risk side of the regulatory settlement necessitates (i) targeted fixes to the redetermination building blocks to address sources of risk and (ii), where that is not possible, further "aiming up" on the cost of equity, so that returns broadly out-balance the residual risk in the package.

14 Cost of debt

(575) The application of the 0.4% wedge on inflation has a massive impact on the allowance for the real cost of debt. Correcting for this error would result in a higher cost of debt that better reflects the realities faced by the sector.

(576) In relation to the cost of new debt, the PDs ask the right question conceptually: can water companies with the target credit rating (BBB+/Baa1) raise debt at costs in line with those implied by the benchmark index? While the CMA's analysis places more weight on

secondary market evidence, despite it being less reliable than primary market evidence;¹³⁵ in addition, it does not make adjustments for new issue premium and primary market evidence or to control for tenor. Contrary to that, considering primary market evidence from November 2022 (which aligns with Ofwat's approach) to the September 2025 cut-off implies a 42bps adjustment. This would be the absolute minimum, since – when controlling for tenor – the adjustment implied is 49bps; and this is supported by secondary market evidence suggesting a 47bps adjustment. On this basis, Anglian considers that there should be an upward adjustment range of 42-49bps, with a point estimate of 45bps.

(577) Regarding the cost of embedded debt, Anglian disagrees with the PDs placing weight to the “actual-notional” cost as a matter of principle, though recognising that the impact of this in practical terms is limited. In addition, Anglian notes that the allowance provided by the PDs leaves no headroom for an increase in interest rates, as it assumes that floating rates remain flat at current levels and does not make an adjustment for plausible sensitivities.¹³⁶

(578) Considering the share of new debt, Anglian notes that the gearing assumption for embedded debt and the refinancing component of new debt reflects industry average gearing, whereas the RCV growth component of new debt reflects 55% gearing. The final redetermination should ensure consistency: applying the industry-average gearing of 70.5% as at 31 March 2025 (industry median of RCV gearing) increases the share of new debt from 27% to 29%. It is also important that the RCV growth used in the CMA's analysis is reflective of all proposed expenditure inclusive of that captured by proposed gated delivery and uncertainty mechanisms.

¹³⁵ Primary market evidence more directly reflects the actual costs at which companies raise new debt; whereas secondary market evidence needs adjustments, e.g. for new issue premium.

¹³⁶ This is contrary to Ofgem's approach in RIIO-2 and RIIO-3. For instance, in its Draft Determination for RIIO-3, Ofgem calibrated the cost of debt to provide headroom against a flat rates + 1% interest rate scenario and concluded this *“results in an allowance that continues to align broadly to forecast average efficient costs under plausible sensitivities which provides assurance of fair consumer costs”* (see Ofgem, RIIO-3 Draft Determinations – Finance Annex, para. 2.112, available at <https://www.ofgem.gov.uk/sites/default/files/2025-06/Draft-Determinations-Finance-Annex.pdf>).

(579) The PDs provide additional borrowing costs of 20bps (issuance cost of 5bps; RCF component of the liquidity cost of 1.4bps; and cash liquidity component of the liquidity cost of 13.3bps). However, the backward-looking cash assumption in the PDs disregards longer-term deposits that companies count in their liquidity sources and is likely to understate the forward-looking cash requirement over AMP8. Instead, using a cost of holding cash based on the one-month average spread between iBoxx and three-month SONIA and a benchmark adjustment of 45bps increases the cash liquidity component of the liquidity cost to 21bps as of June 2025 (and 24bps as of September 2025). In addition, the RD should include a basis risk allowance of 6bps. As the accelerated transition to CPIH indexation creates risk exposure on embedded debt (almost entirely RPI-linked), this allowance would (i) accommodate for risk likely not reflected in observed betas; (ii) compensate investors for the uncertainty associated with a wider distribution of equity returns around the P50 because of exposure to basis risk; and (iii) recognise that companies have entered into large basis swaps to hedge that risk. These adjustments result in a total estimate of additional borrowing costs of 34bps.

15 Financeability

(580) Anglian supports the PDs' more pragmatic approach on debt financeability, in particular the recognition that the guidance from Moody's and Fitch means the financeability assessment for maintaining a Baa1/BBB+ credit rating should "*target an AICR of 1.7x*" (PDs, ¶8.251).

(581) Nonetheless, Anglian remains concerned by the PDs continued use of an FFO / Net Debt target of 10% (PDs, ¶8.254). This is below the S&P tightened guidance requiring a 11-14% ratio. It also assumes that the full benefit of a securitisation structure is available to the notional company. This assumption is incorrect, a number of companies in the sector do not have that benefit. More fundamentally, a securitised structure should not be an element of the notional company construct, even if individual companies have used or are using such structures. Therefore, Anglian requests that the CMA re-assesses the FFO / Net Debt target in line with

the characteristics of the notional company, rather than individual companies in the sector.

(582) The PDs' resilience testing does not reflect the plausible downside scenarios to which the notional company is exposed. The PDs have been modelled on the impact of (a) a 1% RoRE penalty incurred by the firm in each year of the price control; and (b) a 2% RoRE penalty in two years of the price control, with a 1% RoRE penalty in the remaining years (PDs, ¶8.263). This assumption is not robust or realistic and significantly understates the level of downside exposure faced by the notional company. This is best illustrated by looking at the stress tests that Anglian is required to run to satisfy UK Corporate Governance Code requirements as part of the Company's Long Term Viability Statement, by considering severe, plausible and reasonable downside scenarios. For instance, one such scenario considers a totex overspend of 10%, an ODI penalty of 1.5% of RoRE in each year plus a financial penalty of 1% of revenue in a single year. This represents an overall RoRE impact of 2.99%.¹³⁷ It is important that the notional company is tested to an equivalent stress test to ensure the ongoing financial resilience of the sector.

16 Retail Margin Adjustment

(583) Finally, Anglian supports the CMA's provisional decision to remove the RMA and equal the wholesale WACC to the Appointee WACC (PDs, ¶7.819), noting that Ofwat's 1.5% allowance for the retail margin correctly remunerates the retail business for the required return on its capital employed.

(584) However, Anglian disagrees with the CMA's provisional conclusion that the financing cost should be set equal to the Appointee WACC, and not in line with the Appointee cost of equity (PDs, ¶7.817). While Anglian agrees with the CMA's suggestion that all finance is raised at the Appointee level, two key assumptions underpin the PDs' analysis, namely (i) the assumption

¹³⁷ Anglian Water Services Limited, Annual Integrated Report 2025, A new chapter: Delivering growth and resilience (2025), page 119 (See [here](#)).

that the RCV of the Wholesale price control and the Appointee are the same, given the Retail price control does not have its own RCV; and (ii) the assumption of the same gearing for both the Wholesale price control and the Appointee.

- (585) These two parameters necessarily mean that, if there were any debt finance in the Retail price control, then the gearing assumption (and thus the WACC calculation) would need to reflect that. In effect, either the Appointee WACC would need to be calculated based on a higher gearing assumption or the Wholesale price control WACC would need to be calculated on a lower gearing assumption.
- (586) In Anglian's view, either of these routes are more complex than, and have an equivalent end result to, the much simpler option of setting the financing cost equal to the return on equity, by assuming that there is no debt in the Retail price control. This assumption is also better reflective of reality, as all debt in the Appointee is financed against RCV, which sits entirely in the Wholesale price control.
- (587) Accordingly, Anglian requests that the CMA reset the financing cost at a level equal to the return on equity.