Wessex Water

Draft Methodology appendix 9 additional report

1: Higher-priority and higher-level topics

This section discusses a number of higher-priority and higher-level topics concerning appendix 9 of Ofwat's draft methodology, taking the following in turn:

- The nature and extent of progress since PR19.
- Achieving a more outcomes-based approach at PR24.
- Funding nature-based solutions and tackling the capex bias in enhancements.
- The evolution of base expenditure over time.
- The levels of performance funded by totex allowances.
- Choosing between alternative econometric models of base expenditure.
- Enhancement benchmarking.

We provide a more detailed response to appendix 9 of Ofwat's draft methodology in section 2.

1.1: The nature and extent of progress since PR19

Appendix 9 of the PR24 draft methodology sets out Ofwat's proposed approach to cost assessment and the setting expenditure allowances, as well as some closely-related areas (e.g. setting PCLs and the use of PCDs).

This part of the draft methodology involves some useful regulatory housekeeping - tidying up and refining aspects of the PR19 approach - and it also includes some reasonable incremental developments.

Ofwat shows awareness of some of the important limitations of the PR19 approach. Ofwat also highlights guidance from the UK Government SDS that is highly relevant to the need for the regulatory approach to be modified at PR24.

However, the approach set out in appendix 9 falls far short of what is needed if Ofwat is to meet its own objectives and act in accordance the UK Government SDS. Across appendix 9 we see a lack of ambition and innovation to actually tackle Ofwat's stated priorities and address customer needs.

1.2: Achieving a more outcomes-based approach at PR24

Ofwat presents ambitions to adopt a more outcomes-based regulatory approach. But the extent of progress in this direction risks being quite limited at PR24, given the status of the draft methodology.

In some areas (e.g. asset health metrics) Ofwat does not seem to have properly explored the opportunities for more outcomes-based alternatives to the more inputs-focused regulatory approach that it is pursuing.

In other areas (e.g. WINEP and price control deliverables) there is clearly some appetite for reform from Ofwat. But we see a high risk that progress is held back by Ofwat, and indeed water companies, not engaging in the details of the task to develop arrangements that enable a greater regulatory focus on outcomes to be combined with adequate levels of company accountability and customer protection.

1.3: Funding nature-based solutions and tackling the capex bias in enhancements

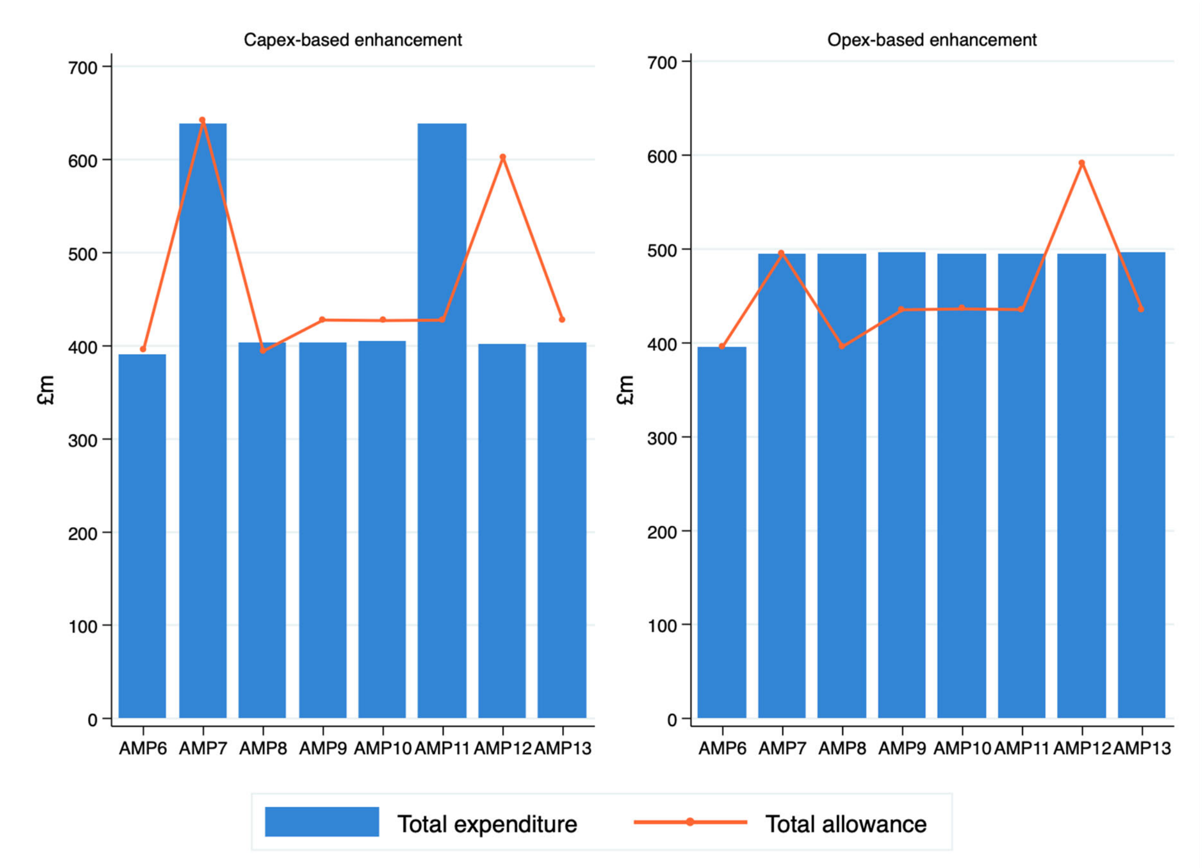
We welcome Ofwat's recognition of the risk of an inefficient capex bias for enhancements and its openness to adapting its regulatory approach at PR24 to tackle this risk.

Our overall view is that Ofwat's ambitions in this area have not yet been matched with the development of effective modifications of the regulatory approach to help tackle this risk.

This is a challenging area. It is critically important that the regulatory regime supports a level playing field between capital intensive and capital light solutions, in terms of surety of funding and also in terms of commensuration of the risk. Opex-based solutions might involve similar degree of financial risk as capex-based solutions, but the way that the price control framework remunerates finance costs and risk creates situations where there is no funding for finance costs of risk under opex-based approaches. This is an additional deterrent to efficient solutions and best value which Ofwat does not seem to recognised or discussed in appendix 9.

Working with Anglian Water and United Utilities we commissioned a project from the consultancy Reckon to explore practical solutions. Reckon's report provides an exposition of how enhancement funding bias arises in favour of enhancement initiatives that involve a relatively high proportion of capital expenditure rather than operating expenditure (see section 3.2 of the Reckon report). It also considers a range of options that might help tackle this bias, and develops and discusses some of these in detail (see section 4 of the Reckon report).

The following charts from the Reckon report provide an illustration, based on simulation modelling analysis, of the financial bias towards capex-intensive solutions from Ofwat's PR19 approach to the allowances for enhancements and base expenditure. The charts compare the assumed expenditure, and price control expenditure allowances, for a hypothetical company doing a one-off capex-based solution in AMP7 against those for a hypothetical company doing an opex-based solution from AMP7 onwards (where these solutions provide the same scale of benefits). In this example, we see that the allowances for the opex-based solution are inadequate relative to expenditure, especially in AMPs 8 to 11, since only the AMP7 costs of the opex-based solution are fully funded by enhancement allowances and the base expenditure allowances from AMP8 onwards do not meet the costs of those opex-based solutions. The charts show a financial advantage for the capex-based solution compared to the opex-based one. See the Reckon report for further explanation of the simulation analysis.



These charts also show that the under-funding problem for opex-based solutions is not limited to a ten-year period as indicated by Ofwat in its draft methodology.

The charts above do not capture the disadvantage to opex-based solutions in terms of under-remuneration of finance costs, but this is recognised in the Reckon report and it is something that we consider to be important for Ofwat to address if a level playing field is to be attained.

We strongly reject the 10-year funding approach for nature-based solutions set out in the draft methodology, as it fundamentally does not recognise the disparity in incentives for an investor. It ignores funding problems after the initial 10-year period and does not address the under-remuneration of finance costs associated with nature-based solutions. This does not seem a serious or credible response to the underlying concerns about the remuneration of opex-intensive enhancements compared to capex-intensive enhancements.

The option of NPV-based additions to the RCV for the forecast operating expenditure provides longer-term funding than the 10-year approach, but the discount rate applied as part of the NPV calculation would need to be significantly below WACC to provide some degree of remuneration of finance costs. Ofwat identified concerns about double counting under this option. This should not rule this option out of consideration. If this approach was introduced, we can see a potential case for an adjustment, so that less than 100% of whole-life opex is added to the RCV, to achieve a level playing field with capex-based enhancements which are not fully-funded via enhancement allowances (e.g. ongoing operating expenditure from capex-based solutions not funded via these allowances after the first AMP). But this type of question could leave unresolved questions as to whether efficient costs of enhancement solutions are adequately funded across the allowances for base and enhancements.

1.4: The evolution of base expenditure over time

Ofwat's current approach to funding water companies' base expenditure is based predominantly on the derivation of allowances from econometric models of historical expenditure (using data stretching back to 2011-12), with adjustments for anticipated productivity growth and real price effects.

Our view is that, without further adjustments of some form, this approach is unlikely to provide a reasonable basis on which to set allowances for the 2025-2030 period. We do not consider that this issue has been taken seriously enough in either the draft methodology or the base costs consultation in December 2021.

There are a number of reasons why setting allowances for base expenditure on a backward-looking basis is not a reasonable approach for PR24.

- The draft methodology gives no attention to the impact of historical capital enhancement expenditure on capital maintenance expenditure requirements in subsequent AMPs. For instance, if enhancement assets with a 20-year life were installed in 2007/08, it would be due for replacement in 2027/28. Ofwat's backward-looking approach, which excludes the initial enhancement costs from the base expenditure models, offers no funding for this expenditure. This issue is explained in more detail in the Reckon report (see section 3.3)

- The draft methodology identifies areas where some companies may have under-performed in the past due to lack of expenditure in specific areas (e.g. mitigation of risks of CSO spills). In these circumstances, expenditure allowances for 2025-30 that are derived from past spend, will tend not provide adequate remuneration for the costs of achieving satisfactory performance.

- The financial incentive properties of the price control framework introduced at PR14 are likely to have encouraged a degree of short-termism by companies. With companies diverting maintenance allowances to address the issues of the day and not necessarily focusing on the long term.

- Ofwat is expecting more and more to be delivered from the allowances that it sets for base expenditure. Indeed, these allowances are intended to cover not just base expenditure but also enhancement expenditure (under the conceptual definitions of enhancements in RAG 4). The expectations for the scale of performance improvement funded by base allowances in the draft methodology (e.g. in setting PCLs) lack a sound logical foundation and risk being excessive.

In the past, and looking across the industry, there have been opportunities for companies to offset some of these factors by limiting expenditure elsewhere, limiting the scale of over-spends relative to allowances that Ofwat has set, on a backward-looking basis, in the past. For instance, some capital maintenance expenditure might be deferred without observable impacts on measured aspects of performance. Furthermore, following introduction of the totex approach at PR14, there was a rebalancing of incentives away from capex-intensive approaches towards opex-intensive approaches, which would tend to put downward pressure on base expenditure in the short term on a transitory basis. These offsetting opportunities will diminish over time, and may be largely depleted already.

We recognise that there may not be compelling evidence to say that the efficient levels of base expenditure during AMP8 will be X% above the levels derived from the econometric models of historical expenditure – making it difficult to address the concerns above via the cost adjustment process.

At the same time, there seems no reasonable basis for setting price controls on the assumption that efficient base expenditure allowances should be some constant amount that is the same, aside from productivity and RPEs, in 2025-30 as it was in 2010-2015. This is especially so when these allowances clearly cover base expenditure to operate and maintain a growing asset base and enhancement expenditure that Ofwat treats as funded by the base expenditure allowances.

We recognise that there is uncertainty about how expenditure requirements will evolve over time, and that to can be difficult at a point in time to assess, and evidence, how exactly the future may differ from the past. Our view is that in the context of this uncertainty, it is not appropriate to require that companies prove beyond reasonable doubt that future efficient expenditure levels are a specified amount higher than the expenditure levels in the period covered by the base cost econometric models. Instead, Ofwat should form a balanced view and use the best estimates it can in light of a range of evidence and considerations.

So far at PR24, Ofwat's seems to have focused on reasons to dismiss concerns raised by companies, rather than properly considering, with an open mind, how efficient expenditure over the 2025-30 period may differ from past levels. Given Ofwat's financing duty,[1] we consider that Ofwat must satisfy itself that its largely backward-looking approach is appropriate for setting allowances in AMP8 or, if not, enable suitable adjustments to be made. Ofwat should be properly engaging with types of issues highlighted above.

1.5: The levels of performance funded by totex allowances

It is very welcome that Ofwat is thinking explicitly about what performance is funded by the allowances from the base models.

Ofwat sets out some operational principles for its approach to PCLs. We consider that there is a need to being our more clearly a more fundamental principle, that underlies these, which is to seek coherence and consistency as far as possible across: (i) the allowances for base expenditure set at PR24; (ii) the enhancement allowances set at PR24; (iii) the allowances for base expenditure and enhancements set at previous price reviews; (iv) the PCLs set at PR24; and (v) regulatory assumptions at PR24 on the scale of productivity improvements to be achieved over time in relation to both expenditure and performance.

Compared to PR19, the material in section 4 of appendix 9 is a valuable step towards greater coherence and consistency in this respect. But this is a very difficult area. Ofwat's exposition of the issues, and its proposed approach for PR24, does not seem sufficiently well-developed and parts of it are not logical.

Our overall view is that more thinking is needing in this area, drawing on engagement between Ofwat and water companies and more careful and detailed analysis. This is a topic that the project we commissioned from Reckon provides some insight and guidance on and will provide a valuable input as Ofwat takes its work forwards.

We highlight a number of more specific points here:

- Ofwat's proposed approach seems to give too little attention to the impacts of historical enhancement expenditure on the levels of performance observed today and, in turn, the levels of performance that can reasonably by seen as funded by the allowances from the base-plus models. This is particularly important where historical enhancement expenditure (and allowances) have differed between companies in proportionate terms.
- It does not actually make sense to talk about performance improvements funded by *base expenditure*. This contradicts the reporting distinctions between base expenditure

[1] CMA (2021) Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: final report, paragraph 9.1339: "In setting the allowed return, our duty is to consider whether investors in a notional company, acting efficiently, have a reasonable expectation of a return equal to its WACC". We consider that a corresponding applies when setting expenditure allowances, which should give investors in a company, acting efficiently, a reasonable expectation of a return equal to its WACC.

and enhancement expenditure that is long-established in the water industry and reflected in RAG 4.10. Instead, Ofwat might refer to performance improvements funded by base expenditure *allowances.* But given that these allowances are intended to cover some enhancement expenditure, it would be clearer and more precise to refer to these as *base-plus allowances*.

- It is important for Ofwat to distinguish between performance improvements which it considers to be funded by *base-plus allowances* (e.g. in light of the nature and scope of the expenditure feeding into the models from which these allowances are derived) and the performance improvements which it considers to be achievable by improvements over time in efficiency/productivity.
- We consider that it may be reasonable in some very specific circumstances for Ofwat to assume a continuing trend of performance improvement is funded by the base-plus (leaving aside improvements assumed to be funded by efficiency/productivity improvements). This applies in particular where – intentionally or inadvertently – significant amounts of enhancement expenditure (properly defined) have been included in input data for base cost models. However, our view is that this must surely be the exception rather than the rule, and something that requires more evidence and explanation before Ofwat can legitimately assume that base-plus allowances (rather than productivity improvement) fund performance improvements over time

We welcome the opportunity to engage further with Ofwat to help it develop its understanding and approach in this challenging area.

1.6: Choosing between alternative econometric models of base expenditure

A large amount of water companies' totex allowances is determined by Ofwat's decision on which possible model specifications to use for the econometric benchmarking of base-plus expenditure. Yet we see major gaps in relation to the way that models are assessed against each other and selected:

- There is a lack of transparency as to the basis on which Ofwat will (and does) determine that suite of models A, B and C is better than suite of models D, E and F, or how it will assess whether a proposed new model should replace a model used at PR19.
- The draft methodology does not seem to give much consideration at all to questions around how best to compare the performance of alternative model specifications (e.g. which metrics, considerations and tests are important).
- Past experience suggests that the relative properties of alternative models can easily be misinterpreted (e.g. incorrect use of R-squared to compare models which have different explanatory variables).

In the draft methodology, as part of its proposed base cost principles for PR24, Ofwat says that one of its principles for PR24 is “robust econometric models” but does not elaborate on what this means.

In the December 2021 base cost consultation, Ofwat included just under a page on the “model selection process” and this briefly commented on some considerations relevant to model robustness and other relevant consideration. But this seemed far short of the depth and quality exposition that this topic warrants.

The importance of model selection – and how best to compare alternative models that are being proposed – does not seem to be recognised in the draft methodology or in Ofwat’s approach more generally.

We consider that Ofwat and companies should engage with the questions around what considerations, metrics and tests should be taken into account in deciding which model specifications – and which suites of models – are most appropriate to use to set allowances. An important aspect of this would be to consider how the robustness of specific models can be best assessed and compared in practice. This seems a valuable intermediate step to progress with before Ofwat and companies are inundated with a vast number of candidate models in early 2023.

1.7: Enhancement benchmarking

One of the key gaps that we see in the PR24 draft methodology concerns the application of benchmarking analysis to enhancement initiatives. This is a major concern given the shortcomings at PR19 and Ofwat’s aspirations for PR24.

There were some substantial problems with enhancement benchmarking at PR24. This includes, for example, the poor quality of models being exacerbating by Ofwat setting allowances in some areas at the minimum of the modelled costs and business plan proposals (reducing the scope for modelling error to even out across models)

For PR24, enhancement benchmarking is further complicated by aspirations related to best value and nature-based solutions. For instance, Ofwat is seeking to encourage more opex-based or opex-intensive enhancements. However, at PR19, Ofwat lacked a reasonable method for benchmarking enhancement expenditure proposals from different companies in a situation where some proposals involve relatively opex-intensive solutions and some capex-intensive solutions. It should be clear that benchmarking these by simply adding together within-AMP capex to within-AMP opex - without regard to the duration of benefits from this expenditure or the spend in subsequent AMPs - is a bad approach. The draft methodology seems to give no consideration to the problems with the PR19 approach and how opex-based enhancements can be benchmarked in a reasonable way at PR24.

In relation to benchmarking for base expenditure, the approach set out in the draft methodology is far more detailed and Ofwat plans to consult on the models in spring 2023.

However, for enhancements where the challenges seem to be greater, there is vey limited detail on the proposed approach and no proposals for a process to share models ,or consult on issues of model design and application, in advance of business plan submissions. While the models used for PR24 DD will draw on business plan data, much can be done in advance to develop and improve the approach.

As at PR19, we sense that Ofwat is drifting towards a situation where insufficient attention has been given to enhancement benchmarking.

2: Providing companies with an efficient cost allowance

2.1: PR24 base cost principles

We recognise that the principles are refined from corresponding consultation principles from the December 2021 base costs consultation.

The principles are not as well-developed as they might be. They seem to mix some broad principles about the overall approach to cost assessment with some more specific points that apply to the choice of econometric models. For instance, the principle relating to coherence is something that should apply to the overall approach to cost assessment whereas the principle on exogenous cost drivers seems specific to the specification of econometric cost models.

We cannot see the rationale for Ofwat maintaining its principle that cost drivers should be outside of companies' control. Ofwat recognises that in practice it will not stick to this principle. If applied strictly, it would rule out, for example, the inclusion of the water treatment complexity variables used at PR19. It does not seem good to start out at PR24 with a principle that Ofwat does not intend to stick to. We see a practical solution. The underlying concern in the draft methodology appears to be that the inclusion of certain variables within econometric benchmarking models could give rise to perverse incentives that pose risks of inefficient behaviour by water companies. It might be better to focus this principle around the need to avoid these risks, but arguably this is already captured under Ofwat's revised principle 7 which refers to driving the right behaviour.

More generally, we consider that selection of econometric models, and variables within those models, should be done in the light of consideration of a range of relevant factors and trade-offs, and that trying to set hard binary rules is unlikely to be appropriate or practical. See the subsection on "Choosing between alternative econometric models of base expenditure" in the previous section for further discussion of issues that are relevant for this.

2.2: Base modelling suite: aggregated versus disaggregated models

Our view is that for both wholesale and retail activities, Ofwat should try to develop models at different levels of aggregation and then make an assessment, in light of the evidence, as to whether the final suite of models should favour one type or another or include models at different levels of aggregation.

It is premature to decide at this stage whether to focus on one type of approach, or indeed to commit to a final suite of models that includes models at different levels of aggregation.

The arguments in favour of aggregated versus disaggregated models are reasonably well-rehearsed although there is perhaps a tendency to overestimate the benefits of aggregated models in cases where these involve visible deficiencies compared to disaggregated models (e.g. lower t-statistics or the inability to accommodate explanatory variables for cost drivers that are expected to be material from an economic, business and operational perspective).

We disagree completely with Ofwat's proposal, at the PR24 methodology stage, to give preference to aggregated models for retail. Ofwat says that "the top-down models performed better than bottom-up models at PR19", but it does not reference any specific evidence for this change of approach from PR19. Looking at Ofwat's reported retail results from the PR19 slow-track final determinations,[2] we found no valid basis for Ofwat's claim that the top-down models were objectively better than the more disaggregated models. We wondered if Ofwat might have adopted the view that the low R-squared for some of the disaggregated models was indicative of these models being inferior to the top-down models. Such an inference would not be valid: it is well-known that R-squared is not comparable across models with different dependent variables.

If Ofwat's position in the PR24 draft methodology on top-down retail models has been influenced by such R-squared comparisons, then this would reflect a serious problem with Ofwat's approach to econometric model development and selection which goes beyond this aspect retail model specification.

2.3: Base modelling suite - scope of costs: treatment of enhancement opex

Ofwat's proposed approach to exclude all historical expenditure reported as enhancement operating expenditure from the input data feeding into the base cost models is an error. There is no logical or reasonable basis for the exclusion of all enhancement operating expenditure from the scope of costs included in the base models. This error acts to unreasonably under-remunerate water companies and is entirely avoidable.

We recognise that the CMA followed Ofwat's approach for this aspect of its own determinations at PR19. On this issue, this CMA got it wrong. This was a relatively minor issue in the PR19 references to the CMA and something that the CMA's report gave relatively limited attention to.

The confusion and mistakes seen on this issue probably reflect some of the complications that arise in terms of the concept of what enhancement expenditure represents. The reason why it is wrong to exclude all historical enhancement operating expenditure from the base cost models is perhaps not obvious at first, but we consider that once this issue is properly considered and understood that this exclusion is a clear-cut error.

The treatment of the enhancement operating expenditure is something that we, along with Anglian Water and United Utilities, asked the consultancy Reckon to investigate in more

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[2] Ofwat (2019) *PR19 slow track draft determinations: Securing cost efficiency technical appendix*, page 173.

detail this year. See Reckon's report (especially section 3.4) for an explanation of the problem and proposed solutions.

As recognised by Reckon it may be appropriate to exclude some enhancement operating expenditure from the base cost models, but it is not credible that this represents the totality or the bulk of enhancement operating expenditure; it is more an exception from the normal type of enhancement operating expenditure which should be included in the models. We support Reckon's proposals for the regulatory reporting arrangements to distinguish between two types of enhancement operating expenditure:

- **Enhancement-investment operating expenditure**. This category captures the special type of operating expenditure where operating expenditure incurred in one year by a water company provides significant enhancement benefits over subsequent years. This type of operating expenditure shares some economic similarities with capital expenditure and might be seen as a form of investment (albeit one where the conditions for the expenditure to be capitalised by a water company are not met, e.g. relating to asset ownership).
- **Enhancement-running-cost operating expenditure**. This category captures all remaining operating expenditure that is incurred to provide enhancement benefits, which might be thought of as the operating expenditure to run and/or operate arrangements that provide enhancement benefits.

This distinction is highly relevant to decisions on what historical enhancement operating expenditure, if any, should be deducted from the historical expenditure data feeding into the base expenditure models. Under the approach to funding enhancement allowances at PR19, it only makes sense to deduct the first type above (which is more similar to capital enhancement expenditure). It is also relevant to how explicit allowances for enhancements that are relatively opex-intensive might be determined.

2.4: Assessment of growth expenditure

The PR24 draft methodology indicates that Ofwat may maintain its approach of including certain categories of historical growth-related expenditure in the data feeding into the base models, but that it is also considering separate models for some growth-related enhancement expenditure in light of additional data requested from companies. Ofwat's proposal are, therefore, quite open at this stage.

We would welcome the opportunity to engage further with Ofwat as it develops its approach further.

We have prioritised our comments on those that seemed most relevant given the type of approaches indicated by Ofwat at this stage:

- We do not consider that the rate of population growth is the only cost driver for the set of growth-related enhancement expenditure included in the base model, further to the explanatory variables already in the models. There are different ways that other cost drivers might be taken into account – whether in the off-modelling adjustment (e.g. regressing implicit allowances for growth across multiple drivers?) or via separate models for certain types of growth-related enhancement expenditure.
- There will need to be consistency between the scope of growth-related enhancement expenditure included in the base models and the revised scope of wholesale price controls, in relation to treatment of contestable connections.

Consideration should be given, in setting price controls, to the potential for significant asymmetric risk that companies may face in looking to accommodate growth in a context of significant uncertainty. As suggested in the report we commissioned from Reckon, we propose the terminology of base-plus models which Ofwat used at points in the PR19 process but now seems to have abandoned. Capital expenditure on growth-related enhancements represents one type, but not the only type, of capital enhancement expenditure feeding into the base models.

2.5: Base modelling: sample period (and use of forecast data)

We consider that Ofwat's decision to use the full sample is somewhat premature. We agree that Ofwat should consider models that use the full set of historical data but Ofwat should keep open the idea of using models that are based on a more recent period if these models perform better.

Of much greater importance is: (a) whether/how model specifications account for changes over time during the sample period (e.g. via time trends or time dummy variables); and (b) how expenditure forecasts for AMP8 are to be derived from these models given these specifications (e.g. which time dummies to apply if time dummies are included in model specifications). We do not consider that this is an issue for the PR24 draft methodology to take a position on. But it warrants serious consideration as Ofwat develops its econometric models.

We disagree with the use of forecast expenditure data as input data feeding in to base models. This data may play a supplementary role, including in relation to a forward-look, and potential cost adjustment claims, but does not seem appropriate for the base expenditure econometric models.

It is one thing for Wessex Water's base expenditure allowances to be set using models of expenditure actually incurred by other companies; it is quite another for Wessex Water's base expenditure allowances to be set using models of expenditure forecast by other companies. This is especially the case for base expenditure where companies have limited accountability for their own forecasts (e.g. because allowances are based primarily on benchmarking) and forecasts may reflect Ofwat's business plan assessment and incentive approach rather than their own central view of expenditure requirements over AMP8.

We are also concerned about what test might use to decide whether or not to use forecast expenditure data for the base models. Ofwat refers to whether "business plan forecasts are sensible and not significantly impacted by different risk appetites between companies" but these factors seem difficult to assess. We would be concerned if, in practice, what determines whether forecast data feeds into Ofwat's base models is whether this increases or decreased the expenditure allowances that will be derived for companies.

Our view is that the adequacy of allowances derived from historical expenditure data, for AMP8, is a major issue at PR24 and not something that can be addressed using forecast expenditure within the econometric modelling.

2.6: Base modelling: model estimation method

We agree with the draft methodology proposals under "model estimation method".

2.7: Base cost modelling consultation in spring 2023

As discussed in section 1 we consider that it would be very helpful for Ofwat and companies to engage with the questions around what considerations, metrics and tests should be taken into account in deciding which model specifications – and which suites of models – are most appropriate to use to set allowances. An important aspect of this would be to consider how the robustness of specific models can be best assessed and compared in practice.

This seems a valuable intermediate step to progress with before Ofwat and companies are inundated with a vast number of candidate models in early 2023.

As discussed, in section 1 we are concerned that, while there is a process planned for developing and sharing base cost models, there are no corresponding plans for models that might be used to benchmark enhancement costs.

2.8: Enhancement benchmarking models

We consider that the section of the draft methodology appendix 9 on enhancement benchmarking is a major weakness of the overall draft methodology. In particular:

- It does not recognise the significant problems at PR19 with the benchmarking models used for enhancements, and the way model results were used to set enhancement allowances.
- It does not recognise the further challenges to enhancement benchmarking that arise from other aspects of the draft methodology (e.g. efforts to promote nature-based solutions).

- It does not provide enough information on Ofwat's approach to enhancement benchmarking for PR24, including in light of the problems and challenges above.
- There sems to be no plan to share and co-create enhancement models with water companies ahead of business plan submissions, in contrast to the approach for base models.

As an example of problems at PR19, a key feature of that approach which was to cap allowances at the minimum of business plan forecast and modelled cost (with some aggregation across related categories such as WINEP), which raises a variety of concerns, especially in terms of systematic downward bias from modelling error not being allowed to even out across a range of models.

Overall, the draft methodology gives the impression that far too little attention has been given to enhancement benchmarking so far. We are keen to work with Ofwat to address this gap.

See our related comments in section 1.

2.9: Enhancement assessment criteria

We agree with the approach of setting out explicit criteria that would be used to structure Ofwat's assessment of companies' enhancement expenditure proposals, building on the assessment gates used at PR19. We also agree with the plan to tailor criteria between enhancement proposals and cost adjustment claims. These are positive regulatory development.

Ofwat is proposing some useful refinements relative to the PR19 criteria. We agree with the removal of the affordability and board assurance criteria in this context.

Ofwat's criteria involve an unnecessary bias in terminology. At a time when Ofwat recognises the need to tackle a residual bias, and encourage more innovative opex-based enhancement initiatives, it does not seem appropriate to have a criterion for "need for investment". This acts to reinforce the idea that enhancement activity is primarily about capital investment. We also think that the language of "need" is not always appropriate, especially in cases where action is not strictly necessary but a reasoned judgement in light of view on evidence on customer benefits and costs. We propose that this criterion is reframed as "Justification for the intervention" or "Justification for the initiative". This change of positioning and terminology would also affect the details of the guidance that Ofwat provides under this criterion.

Ofwat proposes that need for adjustment criterion is removed and subsumed within other criteria. We found this surprising. Our current view is that it should be retained in some form. As Ofwat is aware, there are risks of double counting when explicit allowances for enhancement expenditure are combined with allowances derived from econometric models of base costs. The risk of double counting might arise, for example, for a company that has performed consistently badly relative to other companies for many years and seeks enhancement expenditure at PR24 to catch-up towards the performance of other companies, where such performance might be funded to some degree through the allowances from base models. This issue does not seem to fit well under the other criteria.

2.10: Cost adjustment claims

We agree with the approach of setting out explicit criteria that would be used to structure Ofwat's assessment of companies' cost adjustment claims, building on the assessment gates used at PR19 and tailoring these better to the nature of cost adjustments.

We also agree with the proposal to have a dedicated process and set of criteria for cost adjustments to be applied to allowances derived from the base models.   As for the enhancement criteria, Ofwat's proposed set of criteria include some sensible refinements compared to PR19.

Our fundamental concern with the proposals – and regulatory precedent – on cost adjustment claims is that Ofwat seems to have the view that cost adjustments should be restricted to exceptional or unique cases.

It is important that economic regulation is proportionate and practicable, but this does not equate to the position that the results from inevitably crude econometric benchmarking models should always be applied without further adjustments other than for exceptional/unique cases.

To take one example, at PR19 Ofwat found that it needed to make dramatic change to its approach to the remuneration of growth-related enhancement expenditure at PR19, between draft and final determinations. Those changes involved a set of substantial off-model adjustments applied to all companies to take account of limitations in the ability of the explanatory variables in the base-plus models to take account of the cost drivers that companies face in relation to base-plus expenditure.

Given the models used at PR19, making off-modelling adjustments for differences between companies in drivers of growth related expenditure requirements, insofar as these differences were not captured in the models explanatory variables, was both appropriate and necessary. It would not have been appropriate to require that the growth differences were unique before applying such adjustments.

Ofwat gives the impression that success for its cost adjustment process would be to allow as few adjustments as possible, with these limited to exceptional circumstances. We disagree with this perspective.

Our view is that Ofwat should look to take feasible and proportionate opportunities to improve the alignment between its base-plus expenditure allowances and companies' underlying costs, taking account of underlying cost drivers and limitations in the explanatory variables within the base-plus models.

We agree with the position implied in in the draft methodology that:

- Where cost adjustments claims are for differences between companies that are not captured in the explanatory variables in the econometric models, cost adjustment claims should propose a set of adjustments (referred to as symmetrical adjustments though they might not be symmetrical in a strict sense) that could be applied across the industry in a way that recognises that upward adjustments for some companies should be accompanied by downward adjustments for others – and proposes a practical way to achieve this.
- Where cost adjustments claims are for differences over time, between AMP8 and the historical sample period used for base-plus econometric models, there may be no need to combine upward adjustments for some companies with downward adjustments for others.

Given the prospect of symmetrical adjustments, it is highly important that any company that might be exposed to a downward adjustment is given adequate opportunity to understand, and respond to, adjustments being considered or proposed. We therefore welcome the early cost adjustment process in summer 2023 that Ofwat proposes.

2.11: Setting a stretching but achievable efficiency challenge

We reject the position taken in the draft methodology that since 2011 "*productivity growth in the water sector has stagnated*".[3] If this was to be true, it would reflect a major failure not only on the part of water companies, but also on the part of Ofwat.

There seems to be little basis for this view. The estimation of the extent of productivity improvement is fraught with difficulty. Ofwat refers to a study published by Water UK in 2018, but this fails to take full account of the improvements in quality over time (the quality adjustments it does cover are very limited). In particular, while the industry has incurred vast enhancement expenditure over time, which has improved customer and environmental outcomes substantially, but many of these changes are ignored in the productivity figures in the Water UK study (reflecting the practical challenges of incorporating these), which will tend to mean that reported productivity growth for the water industry is under-estimated. Similarly, the ONS multi-factor productivity estimates that Ofwat refers to are unlikely to take proper account of improvements in service quality and environmental performance over time experienced in the water industry and do not provide a reliable basis on which to judge the performance of the water industry versus other sectors.

[3] Ofwat (2022) Creating tomorrow, together: consulting on our methodology for PR24 Appendix 9: Setting expenditure allowances, page 43

We are concerned that Ofwat's approach to setting "a stretching but achievable efficiency challenge" is based on false premise about the industry's recent productivity growth and the extent of slack that can be eliminated, and low-hanging fruit that can be grasped, during AMP8.

On catch-up efficiency, we have several points of principle to raise:

- Ofwat seems to overestimate the information its modelling and assessment gives on companies' actual efficiency (whether in terms of relative efficiency between companies being attributed to inefficiency, or how changes in expenditure over time are interpreted). The draft methodology says very little about the limitations of the econometric modelling and the risks, for example, that what appears as efficient behaviour is near-term cost minimisation at expense of long-term efficiency and good outcomes.
- The practice of choosing the catch-up assumption relative to a notional benchmark company is familiar from UK regulatory practice. But this create conditions where small changes in the data/models can have big impacts on the level of catch-up improvements to be assumed, and the choice of which benchmark to use (e.g. an upper quartile in benchmarking rankings, or the fourth-placed company or the 85% percentage) can seem rather arbitrary or lacking reason. We suggest that more attention is given at PR24 to the scale of the catch-up assumption being assumed (e.g. X% reduction from predicted values from the econometric models) and the reasonableness of this assumption in the wider context.
- We propose to use a combination of historical and (where appropriate) forecast efficiency evidence to set the catch-up efficiency challenge at PR24.

We were surprised to read Ofwat saying that it was considering "external benchmarks" because "this would ensure that [its] efficient cost allowances do not perpetuate inefficiencies within the sector". Our view is that Ofwat should have much more confidence in the incentive properties of benchmarking within the water industry. The practical challenges from external benchmarks are likely to mean that placing effort in this area is unlikely to represent well-targeted regulation.

We are concerned that Ofwat's overall approach to efficiency may suffer from double and triple counting at PR24. In particular:

- The sector-level productivity growth data (e.g. EU KLEMS) used to support frontier-shift assumptions is likely to include some inter-company catch-up. Indeed processes of innovation, imitation and catch-up are one of the key routes for productivity improvement over time across different sectors of the economy. In this context, double counting can arise if catch-up efficiency assumptions derived from inter-company benchmarking are added to productivity trends from other sectors that already incorporate catch-up improvements within them. We are not aware of Ofwat using data from other sectors that manages to split observed sector-level productivity between genuine frontier-shift (as understood in the water industry) and catch-up elements.

- Productivity improvements may be manifest in terms of cost reductions and/or quality improvements (e.g. in aspects of customer service or environmental performance). Ofwat's approach to PCLs involves expectations of significant improvements over time in aspects of quality and there are risks that the assumed improvements to quality are excessive when combined with the application of frontier-shift productivity assumptions. While data sources such as EU KLEMS may not fully capture the quality improvements within reported productivity growth for other sectors, due to measurement issues, they can be expected to capture some impacts of quality improvements on reported productivity. In this context, Ofwat's implicit assumptions on service improvements, on top of the issue above, entail risks of triple counting the opportunities for efficiency improvements over time.

This second of these is a particularly a complex area and links to issues around the levels of performance funded by base-plus allowances and any incremental levels of performance funded by current or historical enhancement allowances. The levels of performance funded by base-plus allowances is considered in some detail in the Reckon report, and one implications of this is to question Ofwat's apparent assumption that ongoing trends in service improvement can reasonably be expected across all aspects of performance from within the base expenditure allowances. Instead, other than in special cases where some historical enhancement expenditure is intentionally or unintentionally included *within* the scope of data feeding into the base-plus models, such expectations seem to be a form of additional efficiency challenge, rather than a reasoned view of what can be funded by the base allowances in the absence of further efficiency improvements.

We agree with Ofwat's proposals not to cap allowances if a company's business plan expenditure forecasts are significantly below its estimates of efficient expenditure, but not to rule out the use of capping completely in exceptional cases.

As explained elsewhere, we consider that Ofwat should apply the same principle when it comes to setting allowances for specific enhancement categories. At PR19, Ofwat often set allowances based on the lower of its own view of efficient costs and a company's forecast in that area. We consider that approach to be inappropriate and to risk adverse effect on the quality of business plan forecasts, as Ofwat rightly recognises.

2.12: Cost sharing mechanism

We welcome the further consideration that Ofwat has given to the cost sharing mechanism since PR19.

The proposed new approach to setting differential cost sharing rates across companies, and using these to encourage better business plans, is an improvement versus PR19. In particular, the reduction in the scale of differences in incentive rates under the scheme is welcome.

However, we consider Ofwat's proposed approach to be worse than a simple alternative option involving the same incentive rate for all companies and over- and under-spends.

We have a number of concerns in terms of the purpose and design of the scheme:

- Ofwat is being unrealistic, and risks being disingenuous, about what degree of information revelation can be obtained from its cost sharing proposals. Ofwat says that it can use cost sharing to "incentivise a company to reveal its forecast efficient costs in its business plan in exchange of receiving more favourable rates". This does not seem quite right. The incentives arising in relation to information revelation will depend critically on the details of the cost sharing arrangements and the wider approach to business plan assessment.
- Ofwat's cost sharing incentive scheme is far simpler than the complex information quality incentive (IQI) mechanism first introduced by Ofgem, and then applied by Ofwat at PR09 for capital expenditure. But the changes introduced by Ofwat over time have moved the financial incentives from the scheme away from incentives for a company to reveal its central estimate of costs to towards incentives to anticipate and agree with Ofwat's own cost assessment. These incentives may be particularly strong for base-plus expenditure, because of the limited influence that a company's forecasts have on its allowances for base-plus expenditure.
- What Ofwat's proposals for PR25 seem to do is provide a financial reward to a company to submit business plan expenditure forecasts that turn out to be closer to the view of efficient expenditure allowances for that company which Ofwat produces through its own cost assessment process. Since Ofwat's own cost assessment is imperfect, this can amount to incentives for companies *not to* reveal their forecasts of efficient costs.

In this context, Ofwat seems to be making an error: the scheme it proposes cannot be expected to have the effect it is seeking.

It is good to see Ofwat start to recognise that asymmetric incentives can have adverse effects over time. For instance, Ofwat says that "*high asymmetric cost sharing rates could prevent lower whole life cost solutions being taken forward as it could discourage companies from spending more in the current control period (where they would bear a high proportion of costs) and save money in the future (where they would retain a lower proportion of savings*". We agree with this concern.

In addition to the concern above, Ofwat has recognised in the past that that there may be lumpiness in companies' capital maintenance spend in a five-year period and has treated this as part of reason to use longer time series to benchmark base expenditure. But asymmetry in the cost sharing rate prevents peaks and troughs evening out over time for companies.

Given that there are clear distortions and downsides from asymmetric incentive rates, it must be open to question what the intended benefits of that asymmetry is and whether these can be achieved in a less distortionary way.

Our proposed alternative approach is as follows:

- The same incentive rate for all companies and for over- and under-spends, with a good basis for expectations amongst companies that the cost sharing rate will not move substantially from one price control period to the next.
- Business plan financial incentives being purely financial (e.g. proportionate adjustments to WACC) rather than being applied via asymmetric cost sharing rates.

This type of option seems to have been overlooked by Ofwat in its narrow assessment of the two options for cost sharing reported in the PR24 draft methodology: the PR19 approach and the current preferred option to only use the business plan rating to determine cost sharing rates. At the very least, Ofwat should carry out a proper assessment of the alternative above against these options.

3: Funding for water companies to maintain good asset health

Our overall comment on section 3 is that Ofwat's draft methodology does not provide an adequate response to serious concerns that allowances for base expenditure calculated primarily from econometric models of historical expenditure will be insufficient for AMP8. We discuss further in section 1– see in particular the subsection "The evolution of base expenditure over time". In this section we make some comments on more specific aspects of what Ofwat covers in section 3 of appendix 9, but these comments should be read aside those in section 1 .

3.1: Reflecting forward looking pressures in base allowances

Ofwat says that "there does not appear to be evidence that our totex and outcomes regime has overly focused companies on the short term". However, Ofwat does not present any detailed assessment to support this position or to properly consider the *risks* that its regulatory approach might provide companies with financial incentives that are more heavily focused on short-term rather than long-term considerations.

Our view is that it is not sensible or safe for a regulator to use evidence that things have gone wrong in the past as the reason to stick with current regulatory arrangements. This would be a mistake. There are lessons for Ofwat from: (i) financial services regulation before the global financial crisis; and (ii) Ofgem's regulation of energy suppliers. Evidence that major problems have not arisen in the past does not provide assurance about the future.

We also question some of the inferences Ofwat has drawn about short termism. Ofwat says: "*Cost sharing rates do not appear to have encouraged companies to underspend on capital maintenance. In the last completed price control period (2015-20) companies overspent their wholesale water total expenditure allowances, and capital maintenance expenditure increased*". Furthermore, past allowances may have been too low on average and Ofwat's financial and reputational incentives may have had a short-term effect of unduly constraining the degree or over-spend.

Ofwat says that it is proposing more symmetrical cost sharing rates for PR24, which should mitigate any concerns about short termism or capital maintenance expenditure. We were concerned to read this, at two levels:

- On one hand, Ofwat seems to be accepting that its use if asymmetric cost sharing rates present risks short-termism by companies. This seems right: Ofwat's approach to date has had the effect of penalising over-spends,
- There concerns about risks of short termism and insufficient capital maintenance expenditure do not arise simply from asymmetric cost sharing; these are simply one element. There are a range of other features of the regulatory framework which, taken together, present risks of short termism. For instance, one important issue is Ofwat's interpretation that companies who spend less (or plan to spend less) than cost benchmarks derived from rather crude econometric models over a five-year period are efficient and those who spend more are inefficient. This over-interpretation of what the econometric models tell us can affect company behaviour through financial incentives (e.g. business plan review) and reputational incentives.

Ofwat identifies options to capture more of a forward look into its base cost allowance: (a) using forecast cost drivers in for the allowances derived from base cost models and (b) using forecast expenditure data in the base models.

These are very narrow responses to serious concerns in the industry. The draft methodology does not seem to have properly considered a reasonable set of options for tackling the underlying concerns.

Using forecasts of explanatory variables in the econometric models, when setting allowances for AMP8, seems right. But this provides only a very limited forward look. We are concerned that Ofwat might be is deriving a false sense of security from this aspect of its approach.

We do not consider that using forecast expenditure data in base models is a credible response. We discuss this further in our comments on section 2 of appendix 9. Take a scenario where the predicted costs for AMP8 from Ofwat's base-plus econometric models are significantly higher if the models draw on forecast data rather than historical data. In this scenario, we find it unlikely that Ofwat would simply respond by setting allowances at the higher levels implied by the forecast data. Ofwat might instead attribute the difference to forecasts that are excessive, to a lack of ambition, or to inefficiency on the part of companies.

If forecasts of base expenditure are to be drawn on to set allowances, this is likely to require a detailed assessment of the reasons why expenditure might be higher in AMP8 than historically. This type of assessment seems better suited to the cost adjustment process, and we welcome Ofwat's recognition that this could have a role to play in relation to changes over time in efficient expenditure. But Ofwat's proposals on how it would consider cost adjustment claims in this area casts doubt on the contribution that the cost adjustment process can make to tackling concerns in this area.

For instance, the draft methodology does not properly consider the possibility that incentives have led to the past expenditure fed into base cost models being constrained below levels that will be needed in the future – i.e. that base allowances will be too low due to factors that Ofwat might see as endogenous not exogenous. Ofwat's proposals on limiting cost adjustments to exogenous factors would exclude consideration of these issues.

Uncertainty is a massive issue in this area and acts against companies in a context where companies are asked to provide compelling evidence that future costs more than the past.

Ofwat does not given any attention to the view that efficient levels of capital maintenance expenditure will tend to grow naturally over time as a consequence of past enhancements. Ofwat refers to examples from companies around the increased complexity of sewerage treatment (e.g. due to WINEP). But the draft methodology does not show any consideration of this issue and what it means for the evolution of efficient base expenditure over time. This is an issue that is discussed in more detail in the report we commissioned from the consultancy Reckon (see for example sections 3.3 of that report).

3.2: Investment to improve resilience

Ofwat says: "We will retain the resilience investment category under enhancement, but … will refine our definition of this category. We will also provide further guidance to companies on our expectation on developing plans in this area". But doesn't give much detail on what the refinement is.

There seems a lack of clear logic under Ofwat's proposals for deciding what resilience improvements are to be funded from base cost allowances and what from enhancements.

One area that is not discussed is expenditure to improve information and understanding of future resilience risks – argument that this is something that would be worth funding and encouraging directly and which companies may lack incentives to pursue unilaterally.

If an activity is new, it will not be included within the modelled base allowances and so will need consideration on how it is funded, either through enhancement or an ex-post modelling uplift. This should be the key distinction.

4: Delivering service improvements to customers and the environment from expenditure allowances

We welcome the attention that Ofwat is now giving to the issues covered in section 4 of appendix 9.

This is a very challenging area. This reflects, in particular, the difficulties of a regulatory approach that places emphasis on benchmarking (both for expenditure allowances and PCLs) in a context where companies have been given, and will continue to be given, company-specific enhancement allowances that reflect their own needs and circumstances at different points in time.

We feel that, on these issues, Ofwat has made progress relative to its approach at PR19, and that there is the prospect of significant improvements at PR24.

However, at present the proposed approach for PR24, and the understanding of the issues that is set out in the draft methodology, falls substantially short of what is needed for PR24.

This is an area we are keen to work with Ofwat, and other companies, on to put the approach at PR24 on a logical and coherent footing.

4.1: Ofwat's proposed principles

Ofwat sets out proposed principles "for determining the performance levels an efficient company can deliver through [Ofwat's] efficient expenditure allowances". While these principles are unlikely to cover everything that matters, they seem a useful development.

Stepping back, we thought that behind the specific principles proposed by Ofwat, which are at an operational level, there was a more fundamental principle at play: one of coherence, which is actually more important than the specific principles it is proposing.

We consider that there should be an **additional overarching principle** along the following lines: "*We will aim, as far as practical, to ensure coherence between: (i) the allowances we set for base-plus expenditure at PR24; (ii) the explicit enhancement allowances we set at PR24; (iii) the allowances for base-plus expenditure and enhancements set at previous price reviews; (iv) the performance commitment levels we set at PR24; and (v) our regulatory assumptions at PR24 on the scale of productivity improvements to be achieved over time in relation to both expenditure and performance".*

Adopting this principle for PR24 is consistent with what Ofwat said in its December 2021 base costs consultation: "*It is vital that our approach to cost assessment is joined up and coherent. We will work collaboratively to ensure that decisions related to base costs,* *enhancement costs, and cost adjustment claims are all made on a consistent basis, and interdependencies are clearly identified".*[4]

That principle was presented in the context of Ofwat's approach to "base cost assessment" but seems a broader issue that is directly relevant to setting PCLs and to other aspects of cost assessment and is not simply about base costs.

Beyond this, our comments at this stage on the specific principles are as follows:

1. **We will consider if companies should be expected to deliver a common or company-specific level of performance for each PC.**

There are 9 PR24 Common PCs that are proposed to have common targets, several of which already have common targets. Overall, we believe that wherever possible common PCLs should apply as this provides the best way of assessing performance across the sector and removes concerns about companies approach to stretching but achievable targets.

Ideally, PCLs should incentivise stretching performance. However, if PCLs are set at the wrong level or there is no corresponding investment, they can become disincentives and can damage the reputation of the sector overall.

Table 4.1 from the draft methodology is helpful for setting out Ofwat's initial views on which PCLs would be company-specific and which would be common.

Before turning to the details of the table for individual PCs, we think that there are some problems with the structure of the table. The first category is called "Common performance level expected from base expenditure allowances". The implication is that all companies should be expected to achieve the same level of performance from the allowances derived for them from the base-plus models (together with allowances for unmodelled costs). However, for some of these PCs the performance observed in practice will reflect enhancement allowances in past price control periods, which differ between companies.

As highlighted above, Ofwat rightly recognises that where there are differences in historical enhancement expenditure allowances between companies this can affect the appropriate PCLs to set. But when it comes to table 4.1, and the discussion of individual PCs that follows it, Ofwat seems to have given too little attention to the impact of past enhancement expenditure. The base allowance does not fully fund observed performance if that performance was achieved in part by enhancement expenditure excluded from scope of expenditure feeding in to base models.

[4] Ofwat (2021) *Assessing base costs at PR24*, page 16.

A potential response to this situation is to focus on determining the PCL for each company that is funded by totex allowances (rather than base expenditure allowances) and treat this as reflecting:

- Performance funded by base expenditure allowances (in AMP8 and before).
- Performance funded by enhancement expenditure allowances (in AMP8 and before).

We highlight allowances in AMP8 and before because, especially where allowances fund capital expenditure, the allowances made in previous AMPs will feed into the level of performance funded today. We do not see how Ofwat can determine what levels of performance are funded under the PR24 price controls without looking at what funding for investment was explicitly or implicitly provided at previous price reviews.

Looking at what performance is funded by base expenditure allowances – as indicated in the first row of table 4.1 – seems only part of the story. Instead, we would see questions about performance levels funded by base expenditure as an important element of the assessment, which should consider what performance is funded by the totex allowances (present and past) given to each company.

Ofwat's reasoning to explain the allocation of specific PCs to the categories in table 4.1 does not seem well explained. It seems to give too much attention to (i) what level of PCL is appropriate for each company at the expense of (ii) what PCL is reasonable for each company given the funding from base allowances and enhancement allowances (present and past).

There are two questions, (1) do we agree with which PCs should have common performance levels and those that are company specific; (2) do we agree with certain common PCs only being funded through base. We respond to each below.

1). Common PCLs v Company specific PCLs

- Performance is materially affected by an exogenous factor not captured in the explanatory variables for the base cost models.
- There are differences in historical enhancement expenditure allowances between companies that are relevant to the performance.

Specific measures of concern are as follows:

a). Serious pollution incidents – setting this as a common target without a deadband, is a particular concern as explained later in this response.

b). Storm overflows – we do not believe this should be a PC at all, as it is an output and not an outcome and will not lead as directly to improvements in the environment as other measures could. Also, serious pollutions are already included within the Pollution incidents common PC. In addition, companies are already financially incentivised to have no serious pollution incidents through prosecution; so there is a risk of triple penalty which is not a credible approach and not factored into the risk and reward balance. To then set a common PC target level will then incentivise inefficient environmental improvements.

c) Unplanned outage – this is an output measure and it's unclear how it provides an improvement in itself, and potentially should be incorporated within the work of the operational resilience working group (e.g. as a relevant indicator, to be considered alongside other relevant information on system-wide resilience, and not as a financial incentive or target) rather than remain as a common PC.

d) Water quality customer contacts – this is an output measure that incentivised the wrong behaviour, best performance seems to align with how companies manage customer contacts rather than addressing the root causes of the customer contacts.

Of those measures proposed to have company specific targets, the main concern is the expectation that mains repairs and sewer collapses could have a common PCL for PR29. Given the underfunding of infrastructure renewals there is no obvious plan for Ofwat as to how all companies will land in 2030 at a comparable point in order to realistically be targeted with a common PCL. As Ofwat recognises elsewhere in the draft methodology, companies long -term historical investment glidepaths were not necessarily aligned, so any attempt to align them now requires significant additional investment. While this is much needed, much more focus needs to be applied to this and funding in PR24.

2). Base v totex expenditure allowances

We fundamentally disagree that for certain performance commitments, stretching performance should only be funded from base allowances. This is in no way reflective of any regulatory approach taken since privatisation and will both limit improvements in service and detract from focusing on long-term asset health.

We strongly believe that every PC target could be delivered by a combination of Base (both opex and capital maintenance) and enhancement spend and this is a fundamental issue to be addressed.

2. **We expect efficient companies will continue to improve performance over the long term from base expenditure.**

The second principle warrants further consideration. The other three principles relate, at a broad level, to how Ofwat will determine the performance levels that an efficient company can deliver through [Ofwat's] efficient expenditure allowances. Each of the other three principles start "We will consider/we will adjust…". In contrast, principle 2 is more about an expectation rather than the approach. It would be more useful, and more consistent with the other principles if Ofwat changed this to something like: "We will consider the extent to which efficient companies will continue to improve performance from their base expenditure allowances".

In relation to the second principle, we also consider it important to distinguish more explicitly between cases where (a) Ofwat thinks that performance improvement is funded by historical enhancement expenditure captured in benchmarks from base models;[5] and (b) where improvements are to be achieved via efficiency/productivity improvements over time. Doing this would help directly with principle (3).

Given the point above, we suggest an additional principle: "*We will be transparent as to whether the expected levels of performance from companies are funded by the allowances from base-plus models, funded by enhancement allowances (past or present) or funded by efficiency improvements over time*".

Specific considerations are that we consistently strive to be more efficient and also to improve performance through base expenditure. Step changes in performance are most often seen when transformation programmes are implemented (involving information, people, process, systems). However, the pressure on base expenditure, for example in terms of the on-going under funding of below ground asset renewal[6], means there will be very limited improvement in efficiency where investment is the sole mitigation / driver for improvement.

Other factors to consider are, that in order to make improvements in performance over recent years, a greater use of data monitoring and (also a greater expansion of the data we collect with a view to using it in the future) and collection has understandably been deployed. However, the asset lives of assets associated with these activities can be as short as 5-years. In some cases these short-life assets have replaced very long-life assets, and often in the data and telecoms areas the available solutions are driven by the supply chain, not by the requirements of Water Companies, so we often find ourselves with reactive replacement of such assets when they fall out of support or are being 'switched off'. Base expenditure models do not take account of the need for such rapid replacement of new short-life assets, so either performance will not be maintained, or long-term investments will be sacrificed.

There are 3 targets (2 where it is proposed to remove the deadband) which create specific challenges. These are CRI, discharge compliance and serious pollution incidents where the target is in effect 100% compliance. For these measures the future PCLs will be 100%, and yet rarely does a single company achieve these targets in a year, let alone consistently,

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[5] This is one of the rationales for expecting improvements given by Ofwat. Page 77 of Appendix 9 says: "*Historical base expenditure also includes one-off investments to improve service alongside reoccurring costs. Therefore, as our base modelling approach reflects historical expenditure then any historical one-off investments will result in expenditure being available to companies to deliver further performance improvements going forwards*.".

[6] https://www.water.org.uk/wp-content/uploads/2022/06/Options-for-a-Sustainable-Approach-to-Asset-Maintenance-and-Replacement-June-2022.pdf

and it is not possible for a company to consistently improve performance against a 100% target.   Also, historical funding has not been at a level that 'ensures' these targets are met consistently as indeed this is likely to be prohibitively expensive, but this would be necessary in order to have a 100% target without a deadband. To achieve consistent 100% performance in any sector, is practically impossible, but to come close involves creating increasing levels of resilience. The draft methodology refers to the need to protect customers when assessing protection from low likelihood, high impact risks which potentially creates a conflict between 100% targets and protecting customers in terms of affordability. Also, the expectation is that such resilience is funded through enhancement as it will be adding more assets / capacity etc.

It's unclear how Ofwat wants companies to address this issue. This is particularly true where external factors can influence individual events or sample results. This does not seem to be an appropriate expectation of company boards to accept.

Please see our response to question 5.12 with regards to deadbands.

3. **We will consider the overall stretch across cost and service and account for the performance of efficient companies when setting PCLs**

We agree with the view that no company will meet all of its PCLs all of the time, particularly with exclusions being removed; the wide range of performance driven through differing weather effects alone acknowledges this. We also agree with the need to maintain a positive incentive for companies to squeeze more performance out by not setting frontier performance as a basis for setting PCs. Although note our concern in the response to item 2 above regarding situations where a 100% target could apply.

4. **We will adjust PCLs to account for enhancement expenditure where necessary**

We think that principle (4) is useful, but needs some refinement. Our view – supported by the study commissioned from Reckon – is that both enhancement expenditure and enhancement allowances are relevant when setting PCLs. This principle could be revised to: "*We will adjust PCLs to account for enhancement expenditure and enhancement allowances where necessary*".

We support the proposal to adjust PCLs to account for enhancement expenditure as it's important to recognise there are separate base and enhancement activities that can impact performance, although we have specific concerns regarding cost allocation in PR19 as follows.

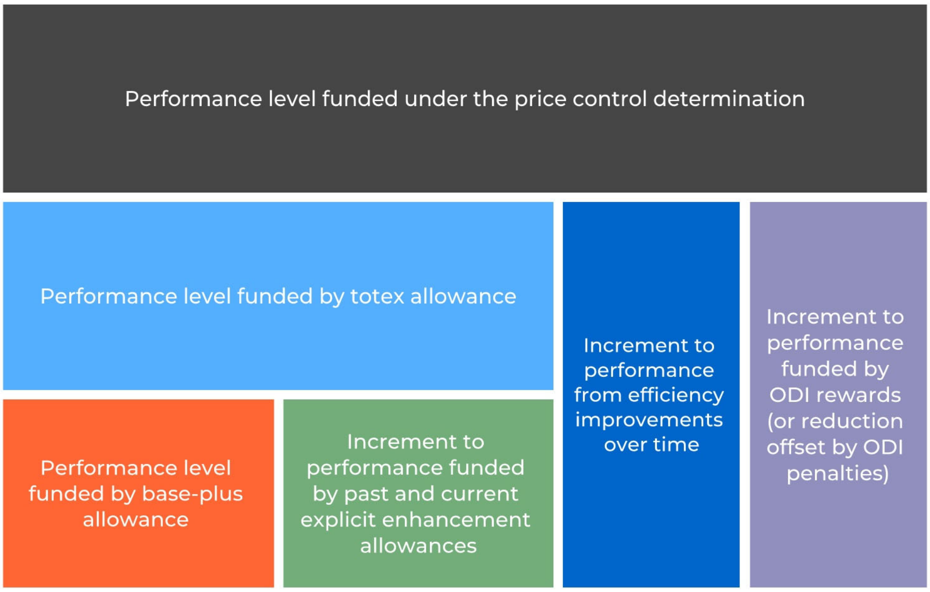
Previously Ofwat accounted for changes in service through enhanced service funding. At PR19, we applied this logic and had the proposed investment for step changing performance for leakage, supply interruptions and pollutions incorporated within base. The PR19 methodology incentivises companies to deliver short term performance inefficiently at the detriment of long term customer and environmental performance. *For PR19, this has* *meant if we were to focus on short-term but high profile PC targets we would need to reallocate base allowances away from other planned, long-term maintenance activities that are genuinely required but have less short-term impact – there is nowhere else for it to come from*. We were very disappointed with this approach at PR19. There is no evidence of this impact through APR submissions as we have no choice but to submit our expenditure as base rather than as the enhancement that it is – RAG4.10 clearly states companies can only report enhancement expenditure against lines where it received enhancement allowances and in PR19 a number of areas (e.g. leakage) where we submitted enhancement expenditure were removed. This is then enforced through the APR query process.

This ultimately creates confusion around what is happening in the industry. Making any assessment of the impact of past enhancement and base much more challenging to undertake. The draft methodology points to practical problems and confusion with the concepts Ofwat is using for cost assessment and its regulatory reporting arrangements. More attention and clarification to both how the concepts are defined and reported are due.

For PR24, we note that leakage will be funded through totex, and we would want reconciliation between base and enhancement expenditure from PR19 to acknowledge and re-align historical investment so it is incorporated correctly in terms of cost assessment for PR24 to ensure we can apply historical cost information for future planning.

Following on from the comments above on principles 2 and 3, it would be better to bring out improvements achieved via efficiency/productivity improvements over time as an additional element feeding into figure 4.1, rather than this being incorporated into "improvements from base expenditure allowance". We see efficiency improvements over time as a logically separate funding channel for performance improvements to the totex allowances. Furthermore, we see a need for Ofwat to consider performance funded by totex, which reflects both the performance funded by base allowances (strictly speaking these are base-plus allowances) and performance funded by enhancement allowances.

This is illustrated in the chart below, which is an extract from the Reckon report and which also recognises that outturn performance in a price control period might be funded in part by ODIs (depending on where PCLs are set).



The Reckon report provides a more detailed discussion of the various different factors that affect the performance levels funded by base-plus allowances. We do not seek to reproduce this here, but make the general comment that the discussion of this issue in the PR24 draft methodology is over-simplified and there is a need for Ofwat to further develop its thinking in this area (this something that the Reckon report, and further engagement with companies, can contribute to).

4.2: Setting performance commitment levels on a common or company specific basis

It seems reasonable to adopt a starting point that a common level of performance should be expected, provided that is only a starting point and that Ofwat recognises the full range of factors that might lead to different position being used for the price control determination for a specific company.

We agree with Ofwat's proposal to consider setting company-specific PCLs where:

- Performance is materially affected by an exogenous factor not captured in the explanatory variables for the base cost models.
- There are differences in historical enhancement expenditure allowances between companies that are relevant to the performance.

There is one further consideration that Ofwat should also be aware of:

- Where performance is captured (or proxied) by the explanatory variables for the base cost models it is likely to be appropriate to set different PCLs for different companies.

We also agree with Ofwat's proposal that, where base model do not reflect all drivers of differential performance between companies, this might be tackled either by setting company-specific PCLs or by cost adjustments. However, we would be concerned if Ofwat were to apply it proposed materiality thresholds for the cost adjustment process (see section 2 of appendix 9) as this could limit the practical relevance of a cost adjustment.

4.3: Baseline performance levels for 2024-25

Ofwat seems to plan to use information on AMP7 performance and on the PCLs set at PR19 to determine the starting level for PCLs at PR24, with a particular emphasis on performance in 2024-25. We did not find Ofwat's proposals in this area to be entirely clear, which affects our ability to comment.

Ofwat does not give enough attention to trying to achieve consistency, as far as possible, between PCLs and the base-plus allowances. As indicated in our comments on Ofwat's principles, we see coherence and consistency as a key issue when it comes to setting PCLs.

One key area that Ofwat considers is the relevance of the PCLs/targets set at PR19. We briefly summarise our views as follows:

- If the data show that companies have significantly under-performed against the 2020-25 PCLs, it does not seem internally consistent, in the absence of further evidence, to adopt the position that base allowances fund at least the PCL set for 2024/25.
- Ofwat indicates it might make an adjustment "if there was sufficient and convincing evidence of material over or underperformance" but then qualifies this by saying it would need to "see root cause evidence of the underperformance being driven by external factors that could not have been foreseen at PR19" – this overlooks the concern that Ofwat's PCLs and base allowances may be internally inconsistent. That concern does not depend on whether factors were exogenous. Ofwat's position does not make sense.
- The levels of performance assumed by Ofwat at PR19, and set as PCLs/baselines/targets for PCs over the 2020-25 period, seem of limited relevance when setting PCLs for the 2025-30 period, especially when allowances for that period are based on actual spend in that period.
- By the same token, if all companies exceeded the PCLs set at PR19, the higher levels of observed performance, rather than the lower targets, would be more relevant for PCLs in the 2025-30 period.

Beyond these points, there is a separate concern which does not seem to get any significant attention in Ofwat's discussion.

This concerns the links between the historical time period covered by the input data and the year taken as a starting point for PCLs for 2025-30, which Ofwat proposes as 2024/25.

We do not understand what basis Ofwat has for assuming that the performance level in 2024/25 is an appropriate baseline for PCLs in a context where:

- Its base models draw on expenditure data back to 2011/12 (Ofwat says in section 2 of appendix 9 that it intends to use the full historical data series to develop the base cost models, back to 2011/12).
- Ofwat's base models at PR19 did not have time trends or time dummy variables, and effectively assumed a constant level of costs over the period, other than changes attributed to variations in the cost drivers captured through explanatory variables.
- Observed performance levels have improved in the period from 2011/12 to 2024/25.

This approach risks internal inconsistency, especially (but not exclusively) if base expenditure in the 2020-25 period is greater than in 2010-15 or 2015-20 (adjusted for inflation and other changes over time). This issue is complicated by the tendency for somewhat cyclical nature of water company expenditure within each AMP, which means that expenditure does not follow steady trends over time.

Ofwat's proposed approach of using 2024/25 seems to involve an implicit, and potentially unintended, assumption of efficiency improvements.

4.4: Determining performance improvements from base expenditure

Our interpretation of appendix 9 section 4.3 ("Determining performance improvements from base expenditure") is that Ofwat considers that such improvements can be achieved in two ways:

- First, via efficiency improvements and productivity improvements over time, which allow for improvements in performance without companies needing to incur additional costs.
- Second, because the "base allowances", derived in large part from econometric models of historical base-plus expenditure, include elements to cover the costs of improving performance over time.

At present these two very difference sources of improvements over time in performance are taken together, which is confusing and provides insufficient transparency to stakeholders about Ofwat's regulatory approach and decision making.

Our proposal is that Ofwat does not use the term "performance improvements from base expenditure" at all. This risks unnecessary confusion and error. Instead, we propose that Ofwat uses the following:

- The first type about could be referred to performance improvements from productivity/efficiency improvements over time.

- The second type could be referred to performance improvements from "base expenditure allowances" or "base-plus allowances". While repeated throughout Ofwat's document, it does not actually make sense to talk about performance improvements from base expenditure, given the way that Ofwat defines base expenditure (and corresponding definitions in RAG 4).

The second type above requires a much fuller review and analysis than Ofwat has provided in the draft methodology.

Ofwat explains its position as follows: *"Historical base expenditure also includes one-off investments to improve service alongside reoccurring costs. Therefore, as our base modelling approach reflects historical expenditure then any historical one-off investments will result in expenditure being available to companies to deliver further performance improvements going forwards".*[7]

We consider that it may be reasonable in some very specific circumstances for Ofwat to assume a continuing trend of performance improvement is funded by the allowances set by base cost models (leaving aside improvements assumed to be funded by efficiency/productivity improvements). This applies in particular where – intentionally or inadvertently – significant amounts of enhancement expenditure (properly defined) have been included in input data for base cost models.

However, our view is that this must surely be the exception rather than the rule, and something that requires more evidence and explanation before Ofwat can legitimately assume that base-plus allowances (rather than productivity improvement) fund performance improvements over time.

Some important questions that follow from the extract quote above are:

- Why does Ofwat think that expenditure that "includes one-off investments to improve service alongside reoccurring costs" is reported as base expenditure, rather than capital enhancement expenditure, given the long-standing separation of capital enhancement expenditure in water companies regulatory reporting under RAG 4>

- Why does Ofwat think that expenditure that "includes one-off investments to improve service alongside reoccurring costs" will be included in its base-plus models, outside of

[7] Ofwat (2022) *Creating tomorrow, together: consulting on our methodology for PR24 Appendix 9: Setting expenditure allowances,* page 77.

capital enhancement expenditure in a small number of growth-related areas was deliberately included in the scope of modelled base costs?[8]

- What evidence does Ofwat have that there is, across the industry and historical data feeding into the base modelling, significant amounts of "investment to improve service" reported as base expenditure or included in the base models (leaving aside growth-related enhancement expenditure that is deliberately included in the base-plus models)?
- Which specific areas of performance, and which PCs, are affected by significant amounts of "investment to improve service" included within the base-plus models?

As things stand, Ofwat's proposes approach seems in danger of being unreasonable and exposed to internal contradictions.

Related to the issues above, Ofwat's draft methodology underplays the influence of past enhancement expenditure – which will be excluded from the scope of expenditure data feeding into Ofwat's base-plus models – on the performance improvements observed over time.

Ofwat says that "*The impacts of enhancement expenditure will also be considered to determine a final PCL*" but it is not clear whether this is (i) a recognition that past trends in performance may not be sustainable without additional explicit enhancement funding or (ii) a recognition that Ofwat needs to assume additional performance improvements in areas where it has set explicit enhancement allowances for AMP8. Both of these points should be recognised, but the draft methodology gives more emphasis to the second and leaves us concerned that the first will be given too little attention.

Ofwat also seems to dismiss the risk of double counting the opportunity for efficiency improvement across costs and performance by saying that in practice productivity estimates do not properly adjust for quality (appendix 9, page 77-78). This is an area that is likely to require more detailed consideration as the PR24 price review proceeds. While the sector-level productivity estimates (e.g. EU KLEMS drawn on by Ofwat for its frontier-shift assumptions applied to expenditure allowances) may not take full account of quality, the extent to which quality improvements are overlooked may be far smaller than in the water industry.

Finally, on the relationship between performance levels and the upper quartile (etc), Ofwat points to the CMA PR19 determination and "*analysis conducted by us and the CMA which*

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[8] These enhancement categories were: new developments (water); new connections element of new developments (water); addressing low pressure (water); new development and growth (wastewater); growth at sewage treatment works (wastewater); reduce flooding risk for properties (wastewater) and transferred private sewers and pumping stations (wastewater). See Ofwat (2022) *PR19 final determinations: Securing cost efficiency technical appendix*, pages 14-15.

demonstrates that high performing companies on cost efficiency were often high performers on service."

Again, this is an issue that is likely to require more detailed consideration as the PR24 price review proceeds. Our view at this stage is that whether high performing companies on the cost benchmarking are also high performers on aspects of performance is an empirical matter that can vary: (i) from one review to the next and requires reassessment for PR24; and (ii) across different aspects of performance – including aspects of environmental performance that are not currently compared across companies in a consistent way and for which there are no current PCs.

This issue is discussed further in the Reckon report: see section 2.4.

4.5: Setting PCLs at PR24 and beyond: (1) adjusting PCLs to take account of enhancement expenditure allowances

In line with comments above, our primary concern with Ofwat's proposals in relation to section 4.1 of appendix 9, is that Ofwat seems to be giving too little attention to the impacts of historical enhancement expenditure on observed performance over time.

This is illustrated in the diagram in box 2 (appendix 9, page 82). A key question for the example discussed in box 2 is how the observed improvement in performance over time (declining number of incidents) in the historical period in figure 4.2 has been achieved. If this improvement has been achieved in part through past capital enhancement expenditure, which was funded by enhancement allowances and which does not feed into the base models, then continuation of that trend may be conditional on further enhancement allowances and the enhancement for company A may be something that sustains that trend rather than something allowing for step-change improvements.

The extent to which observed performance over time has been affected by historical enhancement expenditure will vary across different enhancement expenditure categories, and different PCs, as well as across companies.

In addition, we are concerned that Ofwat could end up being too open to be enabling differences in PCLs across companies, especially where this requires it to provide company-specific enhancement expenditure allowances. Such allowances may look as though they tackle near-term priorities, but we see significant risks of problems and complications further down the line, at future price reviews.

The fundamental issue is that Ofwat's desire to set common PCLs across companies, based on observed performance, does not sit well with an approach in which it provides - specific enhancement allowances for some companies. Those companies that do not receive the same level of enhancement allowances will be exposed to risks of facing unduly challenging PCLs in the future, which are driven by performance of those companies who have had favourable enhancement allowances.

In some cases, it may be appropriate for specific companies to be provided with provide company-specific enhancement expenditure allowances to make further improvements, but we consider the following to be important:

- There should be a very clear need to fund further differentiation in PCLs between companies. Ofwat should give proper consideration to the long-term consequences of funding further differentiation, especially in terms of problems arising for how it sets PCLs at future reviews.
- Ofwat should give proper consideration to an alternative approach of providing all companies with a similar degree of explicit enhancement funding (taking account of company scale, cost drivers, etc), so that customers can benefit from performance improvement beyond that funded by base-plus allowances, without introducing the future problems from enhancement funding levels differing across companies.

We recognise that Ofwat is proposing to ask each company to work out the impacts on PCs of the enhancement allowances it is proposing, both for AMP8 and beyond. This seems a sensible development, but it is not straightforward to evidence and review, and there may be considerable inaccuracy involved. In this context, we do not consider that estimates of the impacts on PCs of company-specific enhancement allowances provide a full mitigation of the concerns above.

As a more general point, we do not consider that the draft methodology gives enough attention to tensions that may arise between the ever-increasing role of cost and performance benchmarking and the emphasis Ofwat wants to place on companies' individual long-term delivery strategies

Ofwat sets out a specific requirement on companies to separately provide performance improvements delivered as part of a company's best value long-term delivery strategy versus performance improvements delivered over the 2025-35 period, from the schemes companies commence in the 2025-30 period – we can understand why Ofwat is thinking about the issues here but they are complicated and not clear Ofwat's approach works, especially because what companies project for base and enhancement expenditure will differ from what Ofwat allows them for base and enhancement expenditure. We think this area warrants further consideration.

4.6: Setting PCLs at PR24 and beyond: (2) assessing the overall level of stretch at PR24

On overall stretch, Ofwat says that is intends to "*review the level of performance expected to be delivered by base expenditure by companies across common performance commitments in-the-round. This will identify if the levels set are suitably stretching when considered in the context of efficient base cost allowances, historical performance, and enhancement expenditure*".

On this, a key point of clarification we suggest is that Ofwat needs to consider:

- Historical enhancement expenditure excluded from base-plus models (e.g. this can lead to the levels of performance funded by base-plus models being significantly below the levels of performance observed).
- Historical enhancement expenditure included within the scope of base-plus models (which may mean that allowances derived from these models can fund further improvements over time).
- Explicit allowances for capital enhancement at past price reviews (which affect what improvements to performance have been funded in the past and can be expected to be sustained).
- Explicit allowances for enhancements at PR24.

In addition to these points, we have a concern about Ofwat drawing on companies forecasts of performance improvements during AMP8 when setting PCLs for AMP8 across the industry. For instance, to take a simplified example, consider two companies A and B which include proposals for performance improvements in two areas, PC1and PC2. Suppose that A's business plan places emphasis on improving PC1 and proposes a 3% improvement on PC1 and a 1% improvement on PC2, whereas B's business plan prioritises PC2, setting a 1% improvement on PC1 and a 3% improvement on PC2. We would be concerned that Ofwat might seek to set controls for both companies by taking the more ambitious business plan proposal in each area, expecting both companies to achieve 3% improvement on PC1 and PC2. This would not be reasonable but can arise if PCLs for each PC are set in a way that departs from past performance and does not take proper account of interactions across PCs.

4.7: Setting PCLs at PR24 and beyond: (3) Incentivising performance improvements over the long term

Ofwat does not plan to set PCLs and ODIs for multiple price control periods, but says it expects to apply the same type of methodology at PR29.

Given Ofwat's desires to incentivise performance improvements over the long term, further consideration of the way that the approach taken to PCLs can affect incentives is likely to be needed.

For instance, Ofwat's approach would benefit from it explicitly recognising that a practice of setting company X's PCL based primarily on company X's past performance tends to dampen long-term incentives. For instance, if improved performance during 2025-30 is expected to lead to a more challenging PCL at PR29, this could (a) reduce incentives for improvement and (b) fail to offer incentives and a funding channel for investment expenditure to improve performance (e.g. as benefits would only be retained within a single AMP).

This issue has practical relevance to the way that Ofwat sets PCLs for those PCs that Ofwat does not set on a common basis across companies. How Ofwat sets PCLs in these cases is likely to affect incentives for future improvements, as it will feed into companies' expectations about how PCLs will be set at PR29.

5: Facilitating efficient investment over 2025-30 and the long term

5.1: Planning investment needs and outcomes over the long term

In relation to WINEP/NEP Ofwat said the following.[9]

"We do not expect an outcomes-based approach to the WINEP/NEP would require significant changes to our regulatory approach, for example as our proposed performance commitments already cover the key areas of focus for an outcomes-based approach such as river and bathing water quality. However, we will consider how the outcomes regime should adapt if necessary to support a more outcomes-focused approach, such as whether any further performance commitments are required. Other elements that might help to facilitate an outcomes-based approach, such as considering best value and encouraging opex solutions, are set out in Section 6."

We consider that the price control framework can – and should be – made more outcomes-based at PR24. We welcome the desire Ofwat expresses in the draft methodology for a more outcomes-based approach to the WINEP/NEP and the intention to adapt its regulatory approach to support this.

We are concerned that, in practice, aspects of Ofwat's regulatory approach could act as a barrier to a more outcomes-based approach, even if the WINEP/NEP becomes more outcomes-based, and that Ofwat might be under-estimating, at this stage, the degree of change that might be needed. We consider that Ofwat should be taking a more pro-active approach to ensuring that its regulatory arrangements and processes are more outcomes-based.

5.2: Delivering long-term targets quickly and efficiently: (1) Net zero GHG emissions

We welcome the clear evidence that Ofwat has been giving thought and attention to the price control funding for action aimed at supporting net zero objectives and reducing GHG emissions.

We also welcome Ofwat's recognition that there is a role for explicit enhancement allowances to support reductions in GHG emissions.

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[9] Ofwat (2022) *Creating tomorrow, together: consulting on our methodology for PR24 Appendix 9: Setting expenditure allowances*, pages 90-91

However, at this stage we have a number of significant concerns with aspects of the approach Ofwat has set out

- Overall, Ofwat's proposed approach is not as outcomes-based as it could be.
- There seems to be potential for an inefficiency from not addressing whole life carbon, especially embodied carbon components. There is some discussion of embedded carbon but that seems to be mostly parked to at least PR29 and Ofwat focuses primarily on operational GHG emissions for PR24, including for PCs and ODIs.
- Related to that point, there is a concern that Ofwat is lacking ambition on the reductions to the usage of embodied carbon that should be pursued, and funded, at PR24.
- There is a potential inefficient capex bias in relation to the enhancement expenditure allowances that Ofwat proposes to set, using estimates of the "the efficient unit cost of carbon reduction" in relation to net zero transition specific investment where the sole driver is operational GHG emission reduction.
- An approach to setting funding for actions to reduce GHG emissions that will provide some companies with proportionality more than others (funding some "company proposals for the net zero challenge") may create significant problems for comparability and consistency when assessing performance in the future.

Ofwat states (page 95) that "*We note that most of the scope in the short term is for the abatement of process emissions of nitrous oxide and methane, but opportunities are available for other areas of the value chain"*. This position is not explained, and we do not support this. For instance, we see opportunities for reductions in embodied carbon through greater use of nature-based solutions, for enhancement and also asset replacement activities and maintenance.

Even if financial ODIs on embedded/embodied carbon are not feasible in the near term, there may be a case for some forms of qualitative governance arrangements and/or flexibility arrangements for how PCs and ODIs are applied to try to limit risks of perverse incentives to reduce GHG at the expense of increase carbon overall and to limit risks of companies overlooking more efficient ways to achieve carbon-related outcomes.

There is a risk that – given unresolved problems in Ofwat's broader approach to enhancement allowances – that under its second, third and fourth funding channels (pages 97-98) there will be a bias towards emissions reduction via capital expenditure rather than operational expenditure (including nature-based approaches), due to the ongoing certainty of funding.

Ofwat refers to the "efficient unit cost of carbon reduction". We are keen to understand more about how Ofwat plans to calculate this, and in particular how it make a reasonable assessment of unit costs in a context where the cost structures for actions to reduce GHG emissions may vary considerably across companies. It would clearly not be appropriate to do what Ofwat did at PR19 and add together estimates of within-AMP capital enhancement expenditure to within-AMP enhancement operating expenditure and benchmark on a totex basis for a specific enhancement category.

We do not support the net zero challenge competition as this will ensure that the industry does not achieve its stretching targets of operational net zero by 2030.

Beyond this we have further, more principled concerns (putting aside the 2030 target) where (a) Ofwat provides different levels of enhancement funding to different companies at PR24 and (b) Ofwat sets PCLs for GHG emissions at PR29 onwards using comparative information across the sector, in a way that is unfair to companies who got less funding at PR24. Ofwat says that “All the funded net zero benefits will be accounted for in company performance commitment levels (e.g. base, standard enhancement, net zero enhancement and successful challenge bids where applicable)” – but there is question of what Ofwat means by this and intends to do about it; perhaps it just means that AMP8 PCLs will reflect performance to be expected from full set of funding. We did not get comfort that Ofwat would take proper account at PR29 and beyond of how enhancement allowances for company X to reduce emissions would affect PCLs for other companies – this seems complicated and may not be effective in practice.

Following on from that point, there might be grounds for trying to keep the price control funding for GHG emissions and net zero as similar/comparable as possible across companies, to reduce (a) risks of unfairness and (b) complexity when setting PCLs for GHG and carbon reduction at future price reviews.

5.3: Delivering long-term targets quickly and efficiently: (2) Storm overflows

This aspect of appendix 9 of the draft determination is heavily dependent on the way that the PC for storm overflows is defined and how PCLs are to be set.

We do not agree with Ofwat’s proposed focus on a PC which is defined simply in terms of the average spills per overflow.

This is not outcomes-based. It does not reflect either the scale/volume of spills or the impacts on river water quality or public health from any discharge.

Moreover, spill events reflect both company action and external conditions, for example rainfall and ground water levels being the most dominant. Evidence for this can been seen in the variability of discharge numbers experienced between 2016 and 2021 across all the sewerage undertakers.

EDM Annual Return: long-term trends for 10 English and Welsh WaSCs	**2016**	**2017**	**2018**	**2019**	**2020**	**2021***
Total no. storm overflows with spill data	862	2,515	6,182	8,276	12,092	12,393
Average number of spill events per overflow with spill data	14.7	13.2	23.8	35.4	32.6	29.4
Average duration (hrs) of each spill event per overflow	8.0	5.1	6.1	8.5	8.1	7.4

Source: Event Duration Monitoring - Storm Overflows - Annual Returns - Long-term Trends

Variation between companies is also significant, with some companies reporting twice the average number of discharges from storm overflows as other companies:

Average Number of discharges / Overflow	Anglian Water	Dwr Cymru	Northumbr	Severn Trent	South West	Southern Water	Thames Water	United Utilities	Wessex Water	Yorkshire Water	Average
2020	24.5	34.0	22.3	26.8	38.4	20.9	39.8	59.2	29.9	30.2	32.6
2021	25.6	29.5	25.3	24.7	38.9	20.2	31.9	41.8	22.4	33.6	29.4

For Wessex Water, YTD figures for the first 7 months of 2022 (for 775 storm overflows for which we have 3 full years' data) further illustrate the variability between years according to rainfall and groundwater levels, where both have been significantly low in 2022.

Wessex Water	Average Number of discharges / Overflow (YTD for the first 7 months)	Total hours of discharge (YTD for the first 7 months)
Jan-July 2020	15.1	105,796
Jan-July 2021	11.9	67,053
Jan-July 2022	5.0	18,234

In setting PCLs in this area, it will be important to ensure that there is consistency with price control expenditure allowances. This raises a number of issues such as:

- If some companies have under-performed in the period 2011-12 onwards in relation to CSOs, by limiting their expenditure and activity levels, then this will feed through to the allowances for base-plus costs. If Ofwat considers that some companies have not spent enough to achieve satisfactory performance in the past, then it does not seem reasonable to set allowances for AMP8 using historical information only. There is a particular risk that the allowances for companies that have performed well are dragged down by the benchmarking approach that draws on data from companies that have performed less well.
- If some companies invest to improve performance towards the end of AMP7 (Ofwat refers to commitments from several companies), then we would question whether this expenditure would feed through to allowances from the base-plus models at PR24. Under RAG 4, such investment would seem to be enhancement expenditure that would normally be excluded from the data feeding into those models.
- Where there are differences between companies in terms of past enhancement expenditure allowances that have enabled improvements in relation to CSO spills (or other interrelated outcomes) then it may not be reasonable to set PCLs for PR24 at a common level, at least without corresponding adjustments to expenditure allowances.

As with other areas of enhancement expenditure, Ofwat's current approach to setting explicit enhancement allowances poses risks of capex bias and deterrent against some types of nature-based solutions when it comes to measures to reduce spills.

5.5: Delivering long-term targets quickly and efficiently: (4) Phosphorous discharge

We support the broad principle of a river water quality performance commitment, which we consider to be consistent with a more outcomes-based approach to economic regulation. If implemented well, it is a promising development.

However, much will depend on the details of how this PC is defined and how PCLs and ODIs for it are set. This is a challenging area for PR24, especially given its novelty.

We welcome Ofwat's view that the PC should cover both the reduction in the amount of phosphorous discharged at wastewater treatment works and phosphorous stopped from entering rivers from wider partnership working including by using nature-based solutions and catchment management.

As highlighted in our comments to section 4 of appendix it will be important that PCLs are set in a way that reflects the historical capital enhancement expenditure allowances that Ofwat has provided companies at past reviews, which may differ between companies, as well as any further allowances at PR245. It will also be important to take account of interactions between the PC and any explanatory variables in the base-plus models relating to effluent consents or complexity of wastewater treatment processes.

5.6: Facilitating efficient long-term investment: (1) WINEP

Ofwat says that it expects all WINEP/NEP funded schemes to be associated with an outcome-based performance commitment or output-based price control deliverable, to ensure that funded schemes are progressed, or funding is returned to customers.

In this context, Ofwat plans to remove the PR19 uncertainty mechanism for WINEP. We recognise that there is substantial overlap between PCDs and uncertainty mechanisms in this context.

We did wonder if, as part of the PCD design (or an uncertainty mechanism linked to the funding and PCD), it may be necessary to consider the scenario where the WINEP requirements change, and a company chooses to deliver a scheme that was not required in the final WINEP. In this scenario, should the company retain the funding if it fully delivers or not?

We are somewhat concerned that Ofwat's proposed move from an uncertainty mechanism to a PCD approach could create undesirable uncertainty on this issue.

In some sense, some enhancement allowances for WINEP might be seen as conditional allowances which are dependent on the final set of WINEP requirements. While Ofwat expects less uncertainty than PR19, at this stage it seems too early to tell whether there may be some residual uncertainty that calls for a degree of conditionality for customer protection purposes.

5.7: Ensuring delivery for customers and environment over the long term (PCDs)

We agree with the introduction of PCDs – particularly as a distinct regulatory concept from outcome focused PCs and ODIs so long as they are applied proportionately.

We do have a substantial concern that the use of PCDs could make Ofwat's framework more input-based and less outcome-based than it needs to be. This is not an inevitable consequence of PCDs, but depends on how PCDs are defined and applied in practice.

There seems to be a potentially major fork in the road for PR24 as to whether the PCDs applied in practice place companies accountable for improvements to outcomes – or drivers of these outcomes – or place companies accountable for inputs, assets and schemes.

This is an important regulatory topic and one which would benefit from more consideration than shown in the draft methodology. The key challenge is how, in practice, to determine PCDs that provide sufficient protection to customers from under or non-delivery of funded enhancements, while focusing incentives and accountability on improvements to outcomes. This is something that needs to be considered on case-by-case basis for each individual enhancement or aspect of performance improvement.

In this context, our view is that if – across Ofwat and water companies – insufficient effort is placed addressing this challenge, the default approach will be inputs-based PCDs. PCDs that are inputs-based or activity-based naturally fall out of work to develop enhancement options, and offer a quick fix for customer protection purposes –but one that takes the regulatory framework in the wrong direction .

In this context, we consider that Ofwat's draft methodology does not do enough to promote a more outcomes-based approach to PCDs.

The draft methodology says very little about the extent to which PCDs would be standardised across companies, as far as possible, or highly bespoke to individual companies. We are concerned that, without pre-emptive action from Ofwat, there could be a large amount of variation across companies. This could then create avoidable problems when Ofwat does benchmarking as the benefits/outputs of companies' proposals could differ considerably even though their costs are being compared. It could also lead to considerable differences in risk exposure across companies which are not properly compensated by Ofwat's allowances for the costs of finance.

Our view is that, before business submission, Ofwat and companies should work together and put serious effort into developing potential types of PCD that could be common across companies and which are more outcomes-focused, looking across different enhancement categories and aspects of performance. This could also find areas where PCDs should not be needed, and sufficient customer protection can be achieved via PCs and the calibration of PCLs.

6: Delivering best value

6.1: Accounting for wider economic benefits

We welcome the attention that Ofwat gives to wider economic benefits in the draft methodology.

We agree with Ofwat's aspirations in this.

We also agree that it makes sense to use common estimates of value where available/possible to reduce differences across companies.

However, we are concerned that Ofwat's approach may not work well in practice and that it is not yet sufficiently well developed.

Much of the material in this part of appendix 9 is about what types of information and analysis companies should provide in support of enhancement proposals in their business plan.

The draft methodology says too little about how it will carry out its cost assessment and determine allowances. In particular, there are questions about how Ofwat's cost benchmarking will be done in cases where companies are proposing best value rather than least cost solutions to meet different types of enhancement need. The types of cost benchmarking models used at PR19 do not seem well suited to cases these cases.

Ofwat says (page 133): *"We will aim to use benchmarking wherever possible. That is, where comparable data exists for similar schemes across enough companies, we will benchmark scheme costs to set efficient cost allowances for the additional benefit scheme. This may include benchmarking the costs of the least cost scheme and using the results of this analysis to challenge the costs of the additional benefit scheme".*

It is far from clear to us that it is reasonable for Ofwat's benchmarking to be done on basis of a set of hypothetical least cost schemes which companies *are not* proposing, which are then used to make adjustments to allowances for proposed best value schemes that may involve completely different solutions and elements of costs.

We consider that Ofwat needs to explicitly consider a wider set of options for how its benchmarking might be done in context of best value solutions and try to further develop and refine these options before deciding on the approach for PR24. The draft methodology simply puts forward one option, in a single paragraph, with no discussion of its pros and cons or of alternatives.

On the details of the NPV calculations for best value, we do not agree with Ofwat's proposal that allowed returns should be calculated using the PR19 allowed return on capital rate unless Ofwat specifies a new rate for PR24. It seems wrong to assume that the PR19 cost of capital will be valid into a very long future time period – the full asset life of potential long-life assets (given the need to calculate depreciation for capital assets). This could create an inadvertent bias against opex-intensive solutions as the costs of finance are under-estimated. If Ofwat feels the need to set the cost of capital assumptions that companies should use, in the interests of consistency, then it should provide companies with a reasonable estimate of the cost of capital into future AMPs. This would not in any way bind future regulatory decisions, when more information is available, and it should be a proportionate exercise. But, especially in the historical context of extremely low interest rates and the recent interest rate rises, it does not seem reasonable to simply assume without further analysis that the WACC for 2020-25 is a reasonable estimate of the WACC in 2030 or 2040 or 2050.

We also wondered whether Ofwat's proposed approach, using an NPV-based framework albeit across scenarios, might under-value:

- options that provide greater adaptability and optionality; and

- innovative options that bring benefits from learning and experimentation (e.g. innovative approaches having a higher cost when first applied but lower costs as rolled out more widely in the future).

Finally, Ofwat's consideration of best value in the draft methodology seems focused on best value when companies are selecting enhancement options. This seems to ignore the potential for best value approaches as companies engage in activities covered by base expenditure allowances, and whether the framework might be adapted to better support this (beyond what is achieved via PCs and ODIs).

6.2: Treatment of enhancement operating expenditure and facilitation of nature-based solutions

See comments made in section 1 above in subsection: "Funding nature-based solutions and tackling the capex bias in enhancements" in relation to Ofwat's proposals in section 6.2.2 of the draft methodology.

6.3: Encouraging companies to collaborate with others and maximise co-funding opportunities

We recognise that, as part of Ofwat's broader approach of using benchmarking across companies as far as possible, that there may be a role for benchmarking in the extent of third party contributions. However, further consideration is needed on how this can be done in practice and what types of adjustments might be needed.

Furthermore, a focus on the average third party funding contribution percentage in companies' allowances and incentives could act to deter initiatives that, due to their circumstances, have a lower-than-average proportion of funding from third parties but still add value at PR24.

If Ofwat is uses benchmarked levels of contributions, when it sets allowances, it is not clear there is a need for Ofwat to also require companies to make commitments / best endeavours commitments etc on third party funding in its business plan.

We are also concerned that an approach of seeking to maximise third party contributions in the short term might be counterproductive compared to companies taking a strategy of developing the base of third parties that can contribute to projects, and establishing successful working relationships and funding models, and looking to gradually increase funding proportions over time.