

Responses to queries on long-term delivery strategies

In May 2022, we invited companies and stakeholders to submit up to five queries each on our final guidance on long-term delivery strategies.¹ We set out our responses below.

Query	Response
Anglian Water	
ANH1: Ofwat has previously stated in its guidance that the scope of the LTDS (and related data tables, scenarios etc) should be constrained to focus on enhancement expenditure only. However, as explored at the workshop on 25 May, some of the scenario factors such as climate change will have an impact on existing assets and the level of expenditure required in future to maintain these assets. During the discussion, George suggested that additional expenditure requirements linked to additional capital maintenance assessed in companies' LTDS should be included in the tables. Can Ofwat confirm this position please?	Our efficient base expenditure allowances provide a long-term efficient allowance for capital maintenance and other elements of on-going company expenditure. In developing their long-term delivery strategies, companies should assume that our base allowances continue to do so over the long term. Companies should develop their own forecasts of improvements expected from base expenditure, taking account of our approach to forecasting 'what base buys' as set out in the PR24 draft methodology. ² The adaptive pathways should then set out what enhancement expenditure is required, over and above what base buys, to achieve the company's long-term ambition in a wide range of plausible scenarios.
ANH2: Please could Ofwat clarify what should be reported in the data tables for the spend where an enhancement asset is built in one AMP and the operational costs continue into future AMPs? Should the tables state the whole life costs or exclude future operational costs from future AMPs as it will be assumed to be within base?	If the construction of an enhancement solution is completed within a price control period, then its associated operational costs will be captured in our base cost models in the following price control period. Therefore, beyond the period in which the solution is constructed, operational costs should not be included in the long-term strategies data tables, as these tables capture enhancement expenditure only. The approach above may change for solutions which are wholly or primarily based on ongoing operational costs if, in our final methodology, we adopt the option set out in our draft methodology to capitalise ongoing operational costs associated with enhancement schemes starting in the 2025-30 control period. ³ In this instance, the operational costs for these solutions should be included in the long-term strategies tables over the whole life of the solution, as this would be categorised as enhancement expenditure.
ANH3: Will Ofwat be commissioning a common economic forecast to assess affordability over the long term? If not, how will they ensure	Our draft methodology details the main policy tools we propose to use at PR24 to address affordability. ⁴ Our collaborative approach to customer research for PR24 includes development of a common approach to testing customer views of the affordability and acceptability of business plans. ⁵ As we develop

¹ Ofwat, '[Long-term delivery strategies at PR24: sector workshop](#)', May 2022, p. 18; Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022.

² Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24](#)', July 2022, Section 6.4, pp. 72-75; Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 4.4, pp. 78-84.

³ For further discussion of our proposals for the treatment of enhancement operational expenditure, see Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 6.2.2, pp. 137-139.

⁴ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 1: Affordability](#)', July 2022.

⁵ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24](#)', July 2022, p. 48.

<p>companies' positions on affordability are comparable?</p>	<p>this approach, we intend to take account of the need for each company to consider fairness between current and future customers, and how its strategy protects customers' ability to pay their water bill over the long term.</p> <p>Our final guidance states that 'companies should consider using scenario testing to demonstrate the strategy is likely to be fair and affordable for both current and future customers'.⁶ This allows for companies to take regional and/or company-specific affordability impacts into account and to test the robustness of the strategy to different plausible futures.</p>
<p>ANH4: Companies may wish to explore the impact of scenarios on base performance as part of the LTDS to be able to answer the question of what base buys –. Technology will be a key factor in driving greater performance from base, and will not be a static input to the assessment. What are Ofwat’s views on how the Technology common reference scenario should be considered assessing in what base buys?</p>	<p>To develop their own forecasts of improvements expected from base expenditure, companies should take account of our approach to forecasting 'what base buys', as set out in the PR24 draft methodology.⁷</p> <p>The potential impacts of different speeds of technological development can be reflected in the estimated enhancement expenditure required to meet the company's ambition under each scenario. Meeting long-term objectives under the slower technology scenario may involve higher enhancement investment than under the faster scenario.</p>
<p>ANH5: Please could Ofwat clarify the definition and role of 'customer representatives' in the LTDS context? For example, the role of CCGs is to ensure we are engaging properly with customers and that the output of that engagement is appropriately reflected in decision making. However clarification is needed as the LTDS Guidance is asking for customer representatives to be more involved in the decision-making process.</p>	<p>Our final guidance states that 'customers and their representatives must be able to challenge the strategies'.⁸</p> <p>As set out in our customer engagement position paper, we expect companies to put in place challenge and assurance solutions that meet their specific needs and ambitions.⁹ We expect evidence of customer challenge to demonstrate that the company has met our standards. As such, each company is determining the nature of these arrangements.</p> <p>Our final guidance acknowledges the challenges around obtaining meaningful views on long-term preferences, although it also states that meaningful views can be elicited from customers through good research design.¹⁰ Where appropriate, companies may wish to consult with customer representatives who have greater knowledge of the water sector and long-term issues. Customer representatives must be able to provide input that can represent the breadth of customers' views to inform companies' thinking on long-term delivery strategies.</p>
<p>Dŵr Cymru</p>	
<p>WSH1: Page 27 says that companies should set out evidence that the strategy delivers in each of the common reference scenarios, and that that evidence should include....: “the long-term outcomes that would be delivered in this scenario.”</p> <p>Our understanding of the framework is that the outcomes are 'fixed', determined by the company ambition as set out in the first section.</p>	<p>The company's long-term ambitions form the starting point for the long-term delivery strategy. The aim of the strategy is then to develop appropriate investment pathways to help meet these ambitions under a range of plausible future scenarios.</p> <p>Page 27 of the final guidance asks companies to set out evidence that the strategy delivers those long-term ambitions under each of the common reference scenarios. This evidence should include details of the results of that scenario testing. This should show that, under each scenario, the strategy achieves at least the performance commitment levels specified by the company's ambition, as set out in data table LS1.¹¹</p>

⁶ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 29.

⁷ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24](#)', July 2022, Section 6.4, pp. 72-75; Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 4.4, pp. 78-84.

⁸ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 13.

⁹ Ofwat, '[PR24 and beyond: Customer engagement policy – a position paper](#)', February 2022, pp. 8-10.

¹⁰ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 14.

¹¹ Ofwat, '[PR24 submission tables](#)', July 2022, Sheet LS1.

<p>How is it then that these outcomes themselves (rather than the path for delivering them) could be different under the scenario testing?</p>	
<p>WSH2: Tables LS5 and LS6 request a view of the total expenditure, by water and wastewater enhancement, under each of the common reference scenarios. If the company has chosen an alternative pathway to deal with an 'adverse' scenario, presumably one would expect that alternative pathway to be reflected here. If not, do you expect companies just to provide a high level estimate of the impact of each adverse scenario on total enhancement? Wouldn't the total enhancement expenditure under each of the 'benign' scenarios be roughly equal in principle to the core pathway, given the principles of adaptive planning?</p>	<p>Under the adverse common reference scenarios in particular, a company may follow two or more adaptive pathways over time to meet its long-term ambition. Inputs into LS5 and LS6 will therefore reflect the total expenditure associated with following this combination of pathways. The activities included in the core pathway should meet the ambition under the benign scenarios, so the total expenditure under these scenarios may simply reflect the core pathway only.</p>
<p>WSH3: On page 30 the document explains that companies may consider using uncertainty testing to assess the robustness of the strategy. Is this different to scenario testing in principle? It says that alternative pathways may be presented to account for changes in material company-specific or local factors. "Here, companies do not need to separately specify assumptions around how these factors will change – only to ensure the strategy is robust to the full range of plausible assumptions." Could you clarify what this means? Surely companies would need to specify the assumptions underpinning any alternative pathways, including those deal with uncertainty factors that go beyond the common reference scenarios?</p>	<p>'Uncertainty testing' refers to techniques such as scenario and sensitivity testing that aim to account for or address uncertainties in long-term planning. Sensitivity testing or analysis is described by the UK government as a method of 'testing the effects of various assumptions on model outputs'.¹² Scenario testing or analysis is a closely related technique that considers the robustness of the strategy given different plausible futures.</p> <p>The line '[h]ere, companies do not need to separately specify assumptions around how these factors will change' refers specifically to factors where a wide range of plausible assumptions have already been accounted for through adaptive pathways. For example, the adaptive pathways will describe the enhancement activities required to meet the company's ambition under scenarios ranging from low climate change to high climate change. Therefore, there's no requirement to separately set out assumptions around climate change, as a wide range of plausible futures are already being addressed using adaptive pathways.</p> <p>Beyond the factors described in adaptive pathways, we expect companies to set out details of the key assumptions that underpin the strategy. This will help to ensure there is a clear line of sight between the current and future strategies, and provide transparency around how the strategy has been developed.</p>
<p>WSH4: A more general question: can you sum up the relationship in the framework between the closely related concepts of uncertainty, assumptions, scenario testing and alternative pathways? For instance (and this may or may not be aligned with Ofwat's thinking), there is clearly a great deal of uncertainty across a wide range of areas in planning for the long term. For some areas of uncertainty (less significant ones) companies may just wish to state their assumptions, and plan on that basis, while reserving the right to revisit them in future. For some more significant areas of uncertainty companies may wish to develop</p>	<p>Adaptive pathways should be focused on the key areas of risk and uncertainty, and as such there will only be a limited number of pathways. Because of this, adaptive pathways are unlikely to account for all material factors or areas of uncertainty.</p> <p>There will be uncertainties that cannot be meaningfully alleviated through these techniques, such as where appropriate trigger points cannot be established, or where the uncertainty is of relatively low materiality. In this case, we expect companies to set out details of the key assumptions that underpin the strategy and to explain on what basis the assumptions are being made. This will help to ensure there's a clear line of sight between the current and future strategies,</p>

¹² UK government, '[Accounting for the Effects of Climate Change: Supplementary Green Book Guidance](#)', November 2020, p. 29.

<p>scenarios against which to test the robustness of our strategy, and/or use the common reference scenarios. Those (uncertainty) scenarios may be dealt with by developing alternative pathways, but it may be sufficient to have explored the sensitivity of the core pathway to the scenario, including (in the case of common reference scenarios) considering the overall impact on enhancement expenditure. Is this a correct understanding of the guidance?</p>	<p>and provide transparency around how the strategy has been developed.</p> <p>Some of these uncertainties can be accounted for through wider scenario or sensitivity testing. This includes using testing to optimise the adaptive pathways so that they are appropriate given a wide range of plausible futures.</p>
<p>WSH5: Almost certainly the biggest uncertainty in our short (to 2030) and long-term planning is about the NEP and related obligations. It will have a material impact on bills, and on what 'headroom' there is to deliver other outcomes. We will have very little visibility of the NEP until late in the process – too late to reflect it in the development of the long-term delivery strategy, which will happen much sooner. Would it be appropriate for us to reflect this uncertainty in alternative pathways, even though the 'triggers' would simply be the extent and nature of the five-yearly NEP requirements, and the associated enhancement expenditure would be based on little more than guesswork...? If not, can we simply make a broad assumption about the NEP-related expenditure in each AMP?</p>	<p>We expect companies to consider the potential enhancement activities that are likely needed under a range of plausible scenarios to meet the company's ambition, including those that may be included in statutory environment programmes.</p> <p>The company ambition should be informed by a range of factors, including statutory requirements, relevant legislation and customer and stakeholder preferences, including through the collaborative approach in Wales.¹³ The solutions may be informed by long-term strategic planning frameworks.</p> <p>We consider that companies should determine the most appropriate trigger for moving to an alternative pathway.</p> <p>Uncertainties can also be addressed using scenario or sensitivity testing, for example by testing the sensitivity of the core pathway to different futures, and then refining the core pathway or developing alternative pathways as appropriate.</p>
<p>Natural Resources Wales</p>	
<p>NRW1: Further clarification on the requirements cross-border, as the policy border is different from the legislative (political).</p> <p>The English companies with sources in Wales will be following the Welsh environmental legislation for those sources (but they don't have WRZ in Wales).</p> <p>DCWW with zones in England – for the English zones in terms of environmental legislation they will have to consult with Natural England / follow England. In terms of water policy, which scenarios to follow etc the devolution settlement is wholly or mainly basis and therefore the DCWW zones in England will follow Wales policy (which will have to be noted for ofwat guidance).</p>	<p>With regard to which scenarios to follow, as set out in our final guidance, we don't require companies in Wales to test the high common reference scenario for abstraction reductions.¹⁴</p> <p>The reference scenarios for abstraction reductions are aligned to the Environment Agency's national environmental scenarios, which have been developed as part of the National Framework to help set a long-term environmental destination in England:¹⁵</p> <ul style="list-style-type: none"> • the high scenario is based on the Environment Agency's 'enhanced' scenario; and • the low scenario asks companies to assume 'only currently known legal requirements for abstraction reductions up to 2050'. This is being applied in the regional plan reconciliation process using the Environment Agency's 'BAU+' scenario, then using local review to take out proposed licence changes with significant associated uncertainty. As communicated to companies in April and May 2022, we support the approach taken by regional water resources groups to apply this scenario. <p>We therefore expect these scenarios to be applied on the same basis as is being applied through the water resources planning process, and don't expect companies to test the common reference scenarios in areas that haven't been covered by the Environment Agency scenarios.</p>

¹³ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 15.

¹⁴ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, Section 4.2.4, pp. 43-44.

¹⁵ Environment Agency, '[Long-term water resources environmental destination: Guidance for regional groups and water companies](#)', October 2020, pp. 8-9.

Severn Trent Water	
<p>SVE1: Will there be a specific “IAP” test of the quality of companies’ LTDS submissions? If so, what will be nature of the test area questions and how will the assessment be used? Will there be supplementary guidance on what you consider good looks like?</p>	<p>As set out in our PR24 draft methodology, we propose to consider long-term delivery strategies in our business plan incentives assessment.¹⁶ We've proposed a two-part framework, 'quality' and 'ambition':</p> <ul style="list-style-type: none"> • our quality assessment covers a range of areas, including long-term delivery strategies. In this assessment, we'll consider whether companies have developed their long-term delivery strategies in line with our final guidance; and • our ambition assessment focuses on companies' proposals for 2025–30. The scope of our PR24 ambition assessment includes costs and outcome delivery and customer affordability and acceptability. These areas are expected to be impacted and informed by long-term delivery strategies.
<p>SVE2: Do you intend to compare/benchmark any or all of the 2050 ambitions, performance metric trajectories, pathways or associated investments put forward in the various companies’ LTDS’s? If so, how will you normalise them across the various regions?</p>	<p>We expect long-term delivery strategies to form a key part of the evidence to justify the need for enhancement expenditure in 2025–30 and provide early sight of future investments. It's for companies to evidence why an enhancement investment is needed now and to the scale that is proposed in the context of the long term, including its long-term ambition to 2050.</p> <p>We expect companies to follow our final guidance in developing their strategies. This includes demonstrating that the ambition is informed by the range of factors described in the guidance,¹⁷ and that the company considers the coherency between its proposed PR24 performance commitment levels, its forecast performance commitment levels up to 2050, and the customer evidence used to inform its ambition.¹⁸ This will ensure a level of consistency and comparability between the strategies.</p>
<p>SVE3: How will Defra, the other regulators and stakeholder views be taken into account in your assessment?</p>	<p>We're required to act in accordance with the UK government and Welsh Government's strategic policy statements in carrying out our relevant functions. We've described how our PR24 draft methodology delivers the strategic priorities set out in these statements.¹⁹ Our final guidance has been developed through consultation with stakeholders, including government and regulators, and we'll undertake our business plan incentives assessment for long-term delivery strategies with reference to this guidance.²⁰</p> <p>We expect companies to engage with wider stakeholders as well as customers to inform their long-term delivery strategies. We expect companies to be able to provide evidence that our standards have been met for engagement activities used to inform PR24 submissions.²¹ We'll take this into account in our assessment of business plans.²²</p>
<p>SVE4: You expect customers' views to be sought and then used in developing our core pathway, how will you assess this and how will</p>	<p>The enhancement activities in the first five years of the long-term delivery strategy will form part of the PR24 business plan. We expect the business plan proposals for these investments to</p>

¹⁶ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24'](#), July 2022, Chapter 11, pp. 129–138.

¹⁷ Ofwat, ['PR24 and beyond: Final guidance on long-term delivery strategies'](#), April 2022, p. 15.

¹⁸ Ofwat, ['PR24 and beyond: Final guidance on long-term delivery strategies'](#), April 2022, p. 14.

¹⁹ Ofwat, ['Delivering UK government priorities for the English water sector through our 2024 price review draft methodology'](#), July 2022; Ofwat, ['Delivering Welsh Government priorities for the Welsh water sector through our 2024 price review draft methodology'](#), July 2022.

²⁰ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24'](#), July 2022, p. 133.

²¹ As set out in Ofwat, ['PR24 and beyond: Customer engagement policy – a position paper'](#), February 2022.

²² Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24'](#), July 2022, Chapter 11, pp. 129–138.

<p>you use that assessment in the price review decisions? To what extent are you expecting the alternative pathways to be tested with customers and stakeholders?</p>	<p>deliver the best option for customers, as defined by our criteria for assessing enhancement proposals.²³ This includes providing evidence of customer views where appropriate.</p> <p>In terms of the full 25-year strategy, we've set expectations that customer engagement on the selection and sequencing of key investments should focus on the core pathway up to 2050.²⁴ In doing so, we've recognised the challenges around obtaining meaningful views on long-term preferences. Companies are welcome to go beyond these expectations, particularly where alternative pathways are being set within the next 5-15 years, as customers can more easily make meaningful contributions about decisions within this timeframe.²⁵</p> <p>Our PR24 draft methodology explains the proposed approach to assessment of companies' PR24 submissions, including evidence of customers' views.²⁶</p>
<p>SVE5: The guidance requires companies to define both decision points and trigger points, this implies decisions will be taken when the evidence supports it rather than constrained to price reviews. What mechanism will be used to within AMPs to enable movement to alternative pathways if the trigger and decision point is reached? Do you expect companies to propose an uncertainty mechanism and should this be agreed (in principle) before plans are submitted?</p>	<p>At PR24, we'll provide efficient cost allowances for all activities that need to be undertaken in the five-year period to be ready for all plausible future scenarios. We don't propose to introduce funding mechanisms for in-period trigger points at PR24, for the reasons set out in our final guidance.²⁷</p>
<p>South East Water</p>	
<p>SEW1: How are Ofwat aligning the environmental ambition laid out in this documents with the ambition set by the EA, for example in the regional and WRMP guidance? e.g. Page 43 – Ofwat doesn't agree with the EAs low scenario for abstraction reductions.</p>	<p>Our final guidance complements the work and desire of the environment destination, and we have engaged with the Environment Agency on this issue.</p> <p>While the Environment Agency has set out that the BAU+ locally verified scenario should be used in planning, the local verification element means that changes could be different, and potentially lower, than those included in the scenario. Local verification, and therefore long-term clarity on the changes required to abstraction, will take time, require evidence and won't be fully understood until after the completion of investigations between 2025 and 2030. For this reason, it's important that the common reference scenarios mark the boundaries of potential changes in each direction. Companies will then test the long-term delivery strategy against both high and low scenarios to demonstrate its robustness to each future.</p> <p>The common reference scenarios include a high scenario, which is based on the Environment Agency's 'enhanced' scenario, and a low scenario which is 'currently known legal requirements'. The latter is being applied in the regional plan reconciliation process by using the Environment Agency's</p>

²³ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24. Appendix 9: Setting expenditure allowances](#)', July 2022, Section A1.1.2, pp. 148-149.

²⁴ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 14.

²⁵ For example, research by CCW has found that one of the least appropriate areas for customer research relates to 'very long-term planning and future scenarios'. However, it also finds customers can make meaningful contributions about investment scenarios in the next 5-15 years. CCW, Blue Marble, '[Engaging water customers for better consumer and business outcomes](#)', April 2020.

²⁶ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24](#)', July 2022, Chapter 11, pp. 129-138.

²⁷ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 49.

	<p>'BAU+' scenario, then using local review to take out proposed licence changes with significant associated uncertainty. As communicated to companies in April and May 2022, we support the approach taken by regional water resources groups to apply this scenario.</p> <p>BAU+, as the 'most likely' scenario, would fit between the high and the low common reference scenarios, so the approaches are compatible.</p>
<p>SEW2: You used the phrase “what does Base buy us” at the workshop, in the context of meeting a company’s long term ambition. We understand that to mean what proportion of a proposed improvement should be covered by base funding.</p> <p>However, by the same approach we are assuming that where base funding requires an increase to meet long term performance targets (that is additional to our current base funding requirements), we should be including that within our enhancement funding requirements, and our adaptive pathways. Is this correct? (An example might be, addressing additional asset deterioration due to climate change impacts).</p>	<p>'What base buys' refers to the level of performance improvement we'd expect an efficient company to make from a baseline efficient performance level, both in the 2025-30 period and across the longer term.</p> <p>Our efficient base expenditure allowances provide a long-term efficient allowance for capital maintenance and other elements of on-going company expenditure. In developing their long-term delivery strategies, companies should assume that our base allowances continue to do so over the long term. Companies should develop their own forecasts of improvements expected from base expenditure, taking account of our approach to forecasting 'what base buys' as set out in the PR24 draft methodology.²⁸</p> <p>The adaptive pathways should then set out what enhancement expenditure is required, over and above what base buys, to achieve the company's long-term ambition in a wide range of plausible scenarios.</p>
<p>SEW3: Adaptive plans might need a decision quicker than every 5 years are Ofwat considering this, including changing of necessary totex up or down, in period?</p>	<p>At PR24, we'll provide efficient cost allowances for all activities that need to be undertaken in the five-year period to be ready for all plausible future scenarios. We don't propose to introduce funding mechanisms for in-period trigger points at PR24, for the reasons set out in our final guidance.²⁹</p>
<p>SEW4: To what extent and will Ofwat be definitive on the certainty of funding past the initial 5 years i.e. confidence in the long term scheme or approach being supported throughout its life assuming the adaptive path is followed.</p>	<p>We're keen to facilitate multi-period investments, where these are best value over the long term, while also protecting customers. We've proposed a series of principles for doing so in the PR24 draft methodology.³⁰</p>
<p>SEW5: There are 8 common reference scenarios (4 with high and low) and the document says WRMP central scenario to be counted as an alternative but only a max of 10 scenarios. This appears to leave one for the water company to generate itself – is this correct?</p>	<p>We've set out data tables that accommodate up to ten adaptive pathways. An adaptive pathway sets out a package of planned investments over time. This is different to a scenario, which is a description of the future. The aim of the long-term delivery strategy is to develop adaptive pathways that meet the company's long-term ambition in a range of plausible scenarios, including the common reference scenarios.</p> <p>We don't expect an alternative pathway for each reference scenario. The core pathway should be designed to meet the company's ambition under at least the benign reference scenarios. Further, an alternative pathway may be sufficient to</p>

²⁸ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24](#)', July 2022, Section 6.4, pp. 72-75; Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 4.4, pp. 78-84.

²⁹ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 49.

³⁰ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 5.3.2, pp. 109-110.

	<p>meet the company's ambition under two or more of the adverse reference scenarios.³¹</p> <p>Overall, this means there will be a minimum of three adaptive pathways: the core pathway, the 'most likely' pathway aligned to the company's WRMP, and at least one further alternative pathway (to meet the company's ambition under adverse scenarios). While the business plan tables accommodate up to ten different pathways, more can be added, and it's up to companies to reassure themselves that enough alternative pathways have been described to achieve their long-term ambition in a range of plausible futures.</p>
<p>South Staffs Water</p>	
<p>SSC1: P9 states that “when presenting the results of testing the strategy, companies should set out the estimated impact of each individual reference scenario.” Please can Ofwat clarify whether the five areas listed in section 3.4.2, (including bill impacts) cover the entirety of the impacts that Ofwat expects companies to cover and evidence in their scenario testing? Are there any further expectations around how the impacts should be presented and the level of detail companies should go in to?</p>	<p>Companies should take ownership of their scenario testing. We expect the evidence presented to demonstrate the strategy is high-quality to include, at minimum, the five areas listed in Section 3.4.2. We also state that companies should 'consider using scenario testing to demonstrate the strategy is likely to be fair and affordable for current and future customers'.³² Scenario testing helps to provide confidence that the strategy is likely to deliver the company's ambition efficiently in a range of plausible futures.</p> <p>Companies should also use scenario testing not just to validate but to develop their strategy, such as by testing the sensitivity of planned investments to different futures. Uncertainties can then be alleviated through refining the investment programme or developing alternative pathways as appropriate.</p> <p>We don't prescribe how the common reference scenarios impact on the strategy, because the nature and magnitude of these impacts will often depend on localised or company-specific factors. Companies should explain how they have considered these factors in their analysis.</p>
<p>SSC2: P9 states “It is essential that all scenarios used to test the long-term delivery strategy are plausible,” and p30 provides a list of topics around which plausible assumptions could be based. Is Ofwat able to provide any further guidance on what evidence it expects to see to demonstrate plausibility?</p>	<p>We define a plausible scenario as one that's possible, but not necessarily the most likely. This is reflected in the design of the common reference scenarios, which aim to describe 'plausible extremes', and so encapsulate a full range of plausible futures. This helps to ensure that the strategy is appropriate given a wide range of uncertainties, while also ensuring it focuses proportionately on the key uncertainties. We expect companies to follow similar principles in their wider scenario testing.</p> <p>Our final guidance sets out some examples of assumptions that companies might include in their strategies.³³ To develop robust long-term investment sequences, companies will necessarily have to make baseline assumptions about how certain factors will change over time, particularly where changes in those factors are not accounted for by adaptive pathways. Where there's significant uncertainty around key factors, companies should consider accounting for this through wider scenario or sensitivity testing and/or alternative pathways.</p>

³¹ We define a benign scenario as 'a scenario that describes a less demanding change in a material factor than expected' and an adverse scenario as 'a scenario that describes a more demanding change in a material factor than expected'. Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 12. The benign common reference scenarios are low climate change, faster technology, low demand, and low abstraction reductions, and the adverse common reference scenarios are high climate change, slower technology, high demand, and high abstraction reductions. Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, Figure 1.4, p. 8.

³² Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 29.

³³ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, pp. 30-31.

<p>SSC3: The final guidance often refers to 'enhancement activities', however this term is not defined in Box 1 Key Definitions on p12. For the avoidance of doubt, please could Ofwat provide a definition?</p>	<p>'Enhancement activities' should be read as synonymous with 'enhancement expenditure'. This is defined in our final guidance.³⁴</p>
<p>SSC4: Does Ofwat have any expectations or further guidance around how the sensitivity analysis for the common reference scenarios and wider scenarios tests (mentioned in S4.3) should be undertaken?</p>	<p>We expect companies to take ownership of their strategies. Companies should judge for themselves how far wider scenario or sensitivity testing is required to ensure an appropriate level of long-term resilience, or to optimise the long-term investment programme by testing against alternative input assumptions.</p>
<p>SSC5: Please could Ofwat provide further clarification on what constitutes a “no and/or low regrets” investment or scenario in particular to adverse scenarios vs a ‘more adverse scenario’ where adaptive pathways are required?</p>	<p>We define a 'no regret' investment as one that is likely to deliver outcomes efficiently under all plausible scenarios, and a 'low regret' investment as one that is likely to deliver outcomes efficiently under a wide range of plausible future scenarios, or needs to be undertaken to meet short-term requirements.³⁵ The core pathway of no- and low-regret investment should include all activities that need to be undertaken to be ready for all plausible future scenarios.</p> <p>Where additional or alternative investments are needed only under certain circumstances, such as if adverse future scenarios come to pass, they are 'higher regret' and should be set out in alternative pathways.</p> <p>The core pathway may include investment for solutions that would only be needed if more adverse future scenarios come to pass, but that need construction to start during PR24.³⁶</p> <p>Testing against the common reference scenarios can help to demonstrate whether alternative pathways may need to be developed. If testing against a scenario shows that the core pathway of low-regret investment is likely to be insufficient for meeting the long-term ambition, then developing alternative pathways can help to meet the ambition if that scenario comes to pass.</p>
<p>South West Water</p>	
<p>SWB1: What will be the regulatory mechanism for releasing funding mid-AMP should a trigger point be reached along an agreed adaptive pathway?</p>	<p>At PR24, we'll provide efficient cost allowances for all activities that need to be undertaken in the five-year period to be ready for all plausible future scenarios. We don't propose to introduce funding mechanisms for in-period trigger points at PR24, for the reasons set out in our final guidance.³⁷</p>
<p>SWB2: Will Ofwat assess both individual enhancement schemes and the overall business plan by companies in the context of LTDS? Would Ofwat expect companies to re-optimize their entire portfolio of investments against alternative futures – or only test individual enhancement cases against the relevant scenarios?</p>	<p>We expect long-term delivery strategies to form a key part of the evidence to justify the need for enhancement expenditure in 2025-30 and provide early sight of future investments. It's for companies to evidence why an enhancement investment is needed now and to the scale that is proposed in the context of the long term.³⁸</p> <p>Companies should use scenario testing to develop their strategy, such as by testing the sensitivity of planned</p>

³⁴ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 12.

³⁵ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 11.

³⁶ We encourage companies to explore options to meet long-term outcomes using flexible, modular or adaptive solutions where possible and efficient to do so. However, where companies do propose large construction schemes, we would expect to see robust evidence that it would be unlikely to be efficient to instead adopt a more flexible solution, or to defer starting construction until a later period. Companies' proposals should include appropriate customer protection mechanisms.

³⁷ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 49.

³⁸ See Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 5.1.1, pp. 86-87.

	<p>investments to different futures. Uncertainties can then be alleviated through refining the investment programme or developing alternative pathways as appropriate. We expect companies to test their whole enhancement investment strategy against the common reference scenarios, alongside wider scenario testing as appropriate.</p>
<p>SWB3: How do companies demonstrate the case for enhancement spending, for example smart metering, when these are explicit reference scenarios; are companies to assume that in these instances, the benign scenarios will be delivered from base?</p>	<p>The common reference scenarios for technology are not targets for companies to meet. It's for companies to consider the best ways to deliver long-term outcomes.</p> <p>The point at which adoption of a technology, such as smart metering, becomes cost-effective may impact on the selection and sequencing of other options over the long term. Testing against these scenarios may expose that an option is 'higher-regret', or 'lower-regret', than initially assumed.</p> <p>We expect companies to explore the potential impact of technological development on the relative costs and benefits of options and the likely optimal sequencing of activities. Where companies consider it particularly implausible that the adoption of a technology could be cost-effective in their region by the dates in the scenarios, this should be highlighted.</p> <p>We set out how we'll consider long-term delivery strategies when setting enhancement allowances in the PR24 draft methodology.³⁹</p>
<p>SWB4: At what level of aggregation should long term enhancement schemes be presented; does Ofwat have a threshold in mind for if a project should be considered as a single discrete investment, or as part of a broader programme?</p>	<p>Companies should describe only key enhancement schemes in their adaptive pathways, and then cover the full enhancement strategy in the accompanying narrative and data tables. Key enhancement schemes could be where:</p> <ul style="list-style-type: none"> • they require material enhancement investment; and/or • are relatively low-cost, but are important to support the strategy, for example to enable future schemes to be delivered or alternative pathways to be followed. <p>We consider that setting a materiality threshold risks excluding schemes that are relatively low-cost, but are important to support the strategy, such as to enable future schemes or alternative pathways. As set out in our final guidance, companies should consider wider interventions, beyond large new investments, including learning, testing through pilots and interventions at systems level.⁴⁰ It's therefore for companies to judge which activities are key to their strategy and therefore should be described in adaptive pathways.</p>
<p>SWB5: Do all legislative enhancement schemes need to be tested against the scenarios, for example WINEP schemes?</p>	<p>We expect the full long-term delivery strategy to be tested against the common reference scenarios, alongside wider scenario testing as appropriate.</p> <p>Companies should assume that all requirements set out in the current WINEP and NEP are completed as part of the strategy. Companies should also consider statutory environmental activities beyond current requirements. The WINEP and NEP for PR24 will confirm these activities for the 2025-30 period. We expect companies to consider long-term investment requirements in this area and how they'll contribute to meeting the company's long-term ambition.</p> <p>In England, the WINEP methodology sets out that actions should be developed as part of a long-term enhancement strategy and</p>

³⁹ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 5.1.1, pp. 86-87.

⁴⁰ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, p. 18.

	that companies should plan to a 25-year time horizon. ⁴¹ This should draw on long-term planning frameworks. We expect companies in Wales to draw on long-term planning frameworks and to develop their strategy collaboratively with Welsh Government, Natural Resources Wales and other stakeholders.
Southern Water	
SRN1: Which elements of the technology scenario do Ofwat consider as potential enhancement spend?	<p>The reference scenarios for technology are not targets for companies to meet. It's for companies to consider the best ways to deliver long-term outcomes.</p> <p>The point at which adoption of a technology becomes cost-effective may impact on the selection and sequencing of other options over the long term. Testing against these scenarios may expose that an option is 'higher-regret', or 'lower-regret', than initially assumed.</p> <p>We expect companies to explore the potential impact of technological development on the relative costs and benefits of options and the likely optimal sequencing of activities. Where companies consider it particularly implausible that the adoption of a technology could be cost-effective in their region by the dates in the scenarios, this should be highlighted.</p>
SRN2: What examples of best practice do you have of application of intergenerational fairness?	<p>Fairness between current and future customers can be explored through customer engagement. We suggest this is an area for potential collaboration between companies, as it's likely that customers will hold similar views across all company areas. We've reviewed our assessment of PR19 submissions and note that we drew attention to engagement exploring intergenerational fairness submitted by Anglian Water, Dŵr Cymru, Portsmouth Water and Thames Water.⁴²</p> <p>Fairness between current and future customers can also be improved by appraising enhancement options over a long-term time horizon. For example, we expect companies to examine the benefit to cost ratio of each scheme option over a time horizon of at least 30 years, taking into account both primary and wider benefits to customers, the environment and society. We set out our expectations for how companies should do this in our PR24 draft methodology.⁴³</p> <p>Companies should propose pay as you go (PAYG) and Regulatory Capital Value (RCV) run-off rates in their business plans that balance the recovery of costs between different generations of customers.⁴⁴</p>
SRN3: What assumptions should be made for the base element of bills from 2030 to 2050?	As set out in our final guidance, bill impacts should be based on the change in bills from enhancement expenditure. ⁴⁵
SRN4: What best practice assumptions are you expecting in relation to cost risk, optimism bias and level of estimation accuracy?	Companies should demonstrate that risks have been considered in the development of the strategy. For example, it may use wider scenario planning to demonstrate that the strategy is resilient to a range of risks, and that that risks are understood and have been considered in the development of the strategy.

⁴¹ UK government, Ofwat, Environment Agency, Natural England, ['Water industry national environment programme \(WINEP\) methodology'](#), May 2022, Section 4.1.

⁴² Ofwat, ['Initial assessment of plans'](#).

⁴³ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances'](#), July 2022, Section 6.1.3, pp. 131-132.

⁴⁴ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24'](#), July 2022, pp. 101-104.

⁴⁵ Ofwat, ['PR24 and beyond: Final guidance on long-term delivery strategies'](#), April 2022, p. 65.

	<p>As set out in our final guidance, companies should set out details of the key assumptions that underpin the strategy, as well as the areas of greatest uncertainty.⁴⁶</p> <p>As set out in our draft PR24 submission table guidance, cost estimates should be presented to three significant figures in 2030-35, and two significant figures beyond 2035.⁴⁷ This reflects the increased level of uncertainty around future cost estimation.</p>
SES Water	
<p>SES1: On page 7 in the final guidance, the core pathway is described as: “The core pathway is consistent with best practice adaptation techniques and should include all activities that need to be undertaken to be ready for all plausible future scenarios”, which suggests it must include base activities/expenditure. In contrast, page 6 in the final guidance and a few other places, the core pathway is described as “The strategy should present a core adaptive pathway of enhancement activities”, which suggests it should exclude base activities/expenditure and only include no- and low-regret enhancement activities/expenditure. Please can Ofwat confirm if the core pathway is to include base activities/expenditure and enhancement activities/expenditure or only enhancement activities/expenditure?</p>	<p>Core and alternative adaptive pathways should describe future enhancement expenditure only. Companies should develop forecasts of the improvements in performance that are expected from base expenditure, considering improved technology and processes, and then set out the additional enhancement expenditure that would likely be required to meet the company's ambition.</p> <p>We also expect companies to provide a clear, holistic narrative on how they expect to meet their long-term ambition, including their approach to maintaining and improving existing assets as part of base activities.</p>
<p>SES2: Please can Ofwat provide “Figure 1.3 Example core and alternative adaptive pathways” from the final guidance with cost on the y axis?</p>	<p>As a generic example, 'cost' can be usefully substituted for 'capacity' in the figure. Alternative pathways will show how, over time, additional or alternative investments will be made according to pre-defined triggers.</p>
<p>SES3: If only enhancement spend is to be included in the core and alternative pathways, please can Ofwat confirm when capital maintenance spend on new infrastructure becomes base expenditure?</p>	<p>Our PR24 draft methodology sets out the proposed scope of base costs.⁴⁸ Companies should apply the scope of base costs as set out in the PR24 methodology.</p> <p>Our efficient base expenditure allowances provide a long-term efficient allowance for capital maintenance and other elements of ongoing company expenditure. We don't tell companies how to use their allowances. Enhancement expenditure is then, generally, investment to achieve a permanent increase or step change in the current level of service to a new 'base' level and/or the provision to new customers of the current service.</p>
<p>SES4: Ofwat has specified the mandatory common reference scenarios at a largely national level. Companies will need to make some sensible, self-consistent assumptions in order to apply them at company level. Does Ofwat plan to test whether the necessary assumptions made by different companies are mutually consistent, or is it sufficient for companies to make sensible, self-consistent assumptions?</p>	<p>Companies should explain how they've applied the common reference scenarios in their analysis. We don't prescribe how the individual reference scenarios impact on the strategy.</p>

⁴⁶ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, Sections 3.5.1, 3.5.3, pp. 30-32.

⁴⁷ Ofwat, '[PR24 submission table guidance – section 9: Long-term strategies](#)', pp. 10, 13.

⁴⁸ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, pp. 16, 21-25.

Thames Water	
<p>TMS1: Have the adaptive pathways been developed with consideration to Defra’s proposed Nation Water Target impact, and is there any guidance on how Ofwat would like the adaptive pathways to incorporate any potential trajectories enabled by a future National Water Target?</p>	<p>The company's ambition, as set out in the long-term delivery strategy, should be informed by a range of factors, including relevant legislation such as, in England, the Environment Act 2021 and targets to be set under it.⁴⁹ Companies should identify the solutions that are likely to be needed under a range of plausible scenarios to meet that ambition, using adaptive pathways. Therefore, we expect English companies to demonstrate how they will deliver the proposed water demand targets. We set out our expectations around this in our PR24 draft methodology.⁵⁰</p>
<p>TMS2: Please can Ofwat provide clarity around the expectations for any data tables to support our methodology for long term delivery strategies and the expected depth of this?</p>	<p>Our draft PR24 submission table commentary sets out our expectations around data tables.⁵¹</p>
<p>TMS3: In PR19 there were subtests that our deliverability was measured against, please can Ofwat provide clarity on any subtests that will be used this time and if we will receive any further insight in the draft methodology?</p>	<p>Our draft methodology proposals for setting expenditure allowances and Board assurance of the plan consider deliverability.⁵² We also propose to use our business plan incentives assessment to encourage deliverable proposals. We expect companies to provide supporting evidence to explain their business plan proposals, including their expenditure proposals. We'll also take this evidence into consideration during our business plan incentives assessment, where we expect ambitious plans to include stretching but deliverable levels of service at an efficient cost to customers.</p> <p>We expect companies to provide Board assurance that their plan and the expenditure proposals within them are deliverable and that the company has put in place measures to ensure that they can be delivered.⁵³ It's our intention that whether companies have provided these assurances will influence the quality component of our proposed business plan incentives assessment.</p>
<p>TMS4: Will Ofwat adjust their affordability mechanisms (economic models) to make greater use of modelled risks, if so how and what expectations may be placed upon companies in terms of model evidence?</p>	<p>Our PR24 draft methodology includes details of our proposed base cost assessment approach and our proposed timeline for base cost assessment at PR24. We look forward to receiving responses to our proposals.⁵⁴</p> <p>We're happy to discuss and consider proposals in the Cost Assessment Working Group that could improve our base cost assessment approach. Similarly, we welcome the submission of proposals to the Future Ideas Lab.</p> <p>As set out in our draft methodology, we do not consider it's appropriate to consider including explanatory variables in our base cost models that are inside of company control (ie endogenous).⁵⁵</p>

⁴⁹ Ofwat, ['PR24 and beyond: Final guidance on long-term delivery strategies'](#), April 2022, p. 15.

⁵⁰ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances'](#), July 2022, p. 104.

⁵¹ Ofwat, ['PR24 submission table guidance – section 9: Long-term strategies'](#).

⁵² Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances'](#), July 2022, p. 49.

⁵³ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24'](#), July 2022, p. 122.

⁵⁴ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances'](#), July 2022, pp. 10-25.

⁵⁵ Ofwat, ['Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances'](#), July 2022, p. 12.

<p>TMS5: Please can Ofwat provide clarity on the treatment of Capital Maintenance funding with respects to adaptive pathways? (this was discussed at the workshop but any further clarity around this would be appreciated)</p>	<p>Our efficient base expenditure allowances provide a long-term efficient allowance for capital maintenance and other elements of on-going company expenditure. In developing their long-term delivery strategies, companies should assume that our base allowances continue to do so over the long term. Companies should develop their own forecasts of improvements expected from base expenditure, taking account of our approach to forecasting 'what base buys' as set out in the PR24 draft methodology.⁵⁶</p> <p>The adaptive pathways should then set out what enhancement expenditure is required, over and above what base buys, to achieve the company's long-term ambition in a wide range of plausible scenarios.</p>
<p>United Utilities</p>	
<p>UUW1: We would welcome the opportunity for feedback on our developing approach to LTDS ahead of the draft PR24 submission. As thinking is emerging in this area across Ofwat, other regulators and water companies, the opportunity to share developing work would be useful in shaping an effective approach and determining areas of focus and level of detail. It would be helpful to understand how Ofwat intend to use the early engagement and to understand what we are likely to receive by way of feedback from this process, to understand how this can be used to shape our plan.</p> <p>We would welcome this engagement in the format of a structured meeting, including a presentation working through our approach, followed by time for questions and discussion. It would be helpful for Ofwat to outline in advance the expectations for discussion and any recommended themes. Following this meeting and subsequent reflection, written feedback from Ofwat would be welcomed. We felt the similar approach taken during early engagement for WRMP and DWMP worked well. Given the timings of other key milestones relating to regulatory submissions over the next 12 months, outlined in the table below, we propose that December 2022 would be the most useful timing of this engagement. This would allow sufficient time to bring together and build on our draft DWMP, WRMP and WINEP preferred options, whilst still allowing time for meaningful adjustments to be made to the LTDS ahead of business plan assurance activities beginning early in 2023.</p>	<p>As communicated to companies in June 2022, we intend to run a series of development meetings for long-term delivery strategies over January and February 2023. This reflects that long-term delivery strategies are a new feature of the price review. We consider that, to be able to provide high-level feedback that fully reflects our PR24 final methodology, the meetings should take place after its publication in December 2022.</p> <p>We'll invite companies to deliver a presentation to the long-term delivery strategies team and we'll set out further details of the expected scope of these presentations later this year. This will be a voluntary process.</p> <p>Companies will individually receive high-level written feedback on their presentations. This feedback will reflect our final guidance and focus on how far we consider the company is developing its strategy in line with our guidance.</p>
<p>UUW2: We understand that Ofwat would like the LTDS to be supported by narrative on base and enhancement activities, and that the adaptive pathways should focus on material</p>	<p>We agree that the effective management of assets is vital to meet the long-term challenges the sector faces. Companies should consider how performance improvements from base expenditure will help to deliver their long-term ambition. We</p>

⁵⁶ Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24](#)', July 2022, Section 6.4, pp. 72-75; Ofwat, '[Creating tomorrow, together: consulting on our methodology for PR24, Appendix 9: Setting expenditure allowances](#)', July 2022, Section 4.4, pp. 78-84.

<p>enhancement expenditure. We believe we will need to consider both maintenance and enhancement interventions to carry out effective adaptive planning. Without considering the full picture of investment, we could miss opportunities to deliver low regrets solutions. Additionally, further clarity would be welcomed on what level of expenditure is perceived as 'material' and how this will be used in the PR24 process.</p> <p>We reflect on discussions at the recent workshop regarding capital maintenance and the importance of this to support the LTDS. We are conscious of the growing pressure on base expenditure from exogenous factors such as climate change and ageing assets; factors that will become increasingly material over time. To manage these risks and operate in the overall best interests for customers, while remaining fair and attractive to shareholders and investors, consideration needs to be given to effective funding strategies to ensure sustainable and efficient investment.</p> <p>We feel that the uncertainty inherent in developing expenditure profiles for the long term should be reflected by high level costings for future investment periods. Beyond the immediate planning cycle (in this case AMP8), we suggest that expenditure should be rounded to the nearest two significant figures. Two significant figures will be more appropriate for the level of certainty associated with the LTDS, rather than three decimal places as requested in the data table provided with Ofwat's draft guidance in November 2021.</p>	<p>expect companies to understand the long-term risks to customers and the environment from asset failure and to explain how they will effectively manage them. Enhancement investments should then build on these activities to meet long-term objectives.</p> <p>Companies should describe only key enhancement schemes in their adaptive pathways, and then cover the full enhancement strategy in the accompanying narrative and data tables. It's for companies to judge which activities are key to their strategy and therefore should be described in adaptive pathways. Key enhancement schemes could be where:</p> <ul style="list-style-type: none"> • they require material enhancement investment; and/or • are relatively low-cost, but are important to support the strategy, for example to enable future schemes to be delivered or alternative pathways to be followed. <p>As set out in our draft PR24 submission table guidance, cost estimates should be presented to three significant figures in 2030-35, and two significant figures beyond 2035.⁵⁷ This reflects the increased level of uncertainty around future cost estimation.</p>
<p>UUW3: We note the "most likely" WRMP climate change pathway has been maintained as an alternative pathway within the LTDS guidance. This could lead to discrepancy between the recommendations made in our WRMP and our long term strategies. We are conscious that this discrepancy could confuse customers and stakeholders, and could result in abortive work given that the WRMP is bound by statutory requirements. For consistency, we suggest the 'most likely' scenario as required in the WRMP should be the core pathway in the LTDS. Our adaptive pathways can test this against Ofwat and local scenarios where they add value for planning purposes.</p> <p>As outlined in our response to the LTDS consultation, the use of RCP 2.6 within the 'benign' climate change scenario serves as an extreme 'low' stress test rather than a plausible future scenario. Current global</p>	<p>The water resources planning guideline sets out that the WRMP should include a 'most likely' and core pathway.⁵⁸ In their WRMPs, we expect companies to present an investment programme to meet 'most likely' scenarios, and – in a separate section of the plan – to provide details of their core and alternative pathways. At PR24, we'll provide efficient cost allowances for all activities that need to be undertaken in the five-year period to be ready for all plausible future scenarios. The core pathway is designed to identify no- and low-regret options. It includes investments that need to be undertaken to meet short-term requirements. Activities should only be included in an alternative rather than core pathway if they only need to be carried out under certain circumstances. As such, there is likely to be relatively minimal, if not zero, divergence between the 'most likely' and core pathways in the 2025-30 period and a greater divergence is likely to emerge later in the timeline.</p> <p>We've aimed to set out common reference scenarios that represent a wide range of plausible future uncertainties. As set out in our final guidance, we consider there's sufficient</p>

⁵⁷ Ofwat, '[PR24 submission table guidance – section 9: Long-term strategies](#)', pp. 10, 13.

⁵⁸ Environment Agency, Natural Resources Wales, Ofwat, '[Water resources planning guideline](#)', April 2022, Section 10.8.

<p>activity means that an RCP 2.6 climate pathway is now nearly impossible for the international community to deliver, and global trajectories most closely align to RCP 4.5 and RCP 6.0 pathways for around 1.7 °C to 3.7 °C of average global warming.</p> <p>Additionally, we note the different scenario guidance for England compared to Wales. We are concerned that this may force inconsistency for companies that operate in both England and Wales, like U UW. We would appreciate feedback on how to manage this potential conflict in the guidance.</p>	<p>evidence that RCP2.6 is plausible, even if it may not be the most likely scenario.⁵⁹</p> <p>The reference scenarios for abstraction reductions are aligned to the Environment Agency's national environmental scenarios, which have been developed as part of the National Framework to help set a long-term environmental destination in England:⁶⁰</p> <ul style="list-style-type: none"> • the high scenario is based on the Environment Agency's 'enhanced' scenario; and • the low scenario asks companies to assume 'only currently known legal requirements for abstraction reductions up to 2050'. This is being applied in the regional plan reconciliation process using the Environment Agency's 'BAU+' scenario, then using local review to take out proposed licence changes with significant associated uncertainty. As communicated to companies in April and May 2022, we support the approach taken by regional water resources groups to apply this scenario. <p>We therefore expect these scenarios to be applied on the same basis as is being applied through the water resources planning process, and don't expect companies to test the common reference scenarios in areas that haven't been covered by the Environment Agency scenarios.</p>
<p>U UW4: We value engagement with customers and agree this will be key to informing future service levels while considering affordability and intergenerational fairness. We recognise the challenges in securing meaningful customer research on long term issues and the views of future generations. We would welcome details of any relevant customer engagement Ofwat has recently commissioned, or is planning to carry out.</p>	<p>The PR24 draft methodology sets out in what aspects of PR24 we've implemented a collaborative approach to cross-sector customer research. This includes:</p> <ul style="list-style-type: none"> • research on customer priorities;⁶¹ • research to inform ODI rates; and • developing a research approach for companies to use when testing customers' views of the acceptability and affordability of their business plans, and long-term delivery strategies, ahead of submission. <p>We'll continue to share any customer research commissioned by Ofwat, and encourage companies to share research findings that may be relevant across the sector, as set out in the standards for high-quality research.⁶²</p> <p>We're also proposing open challenge sessions, which customers and other stakeholders can attend so that they have opportunities to challenge companies on their PR24 submissions directly in an open forum.</p> <p>We expect company-specific engagement to inform long-term delivery strategies. Companies should provide evidence that our standards for research, challenge and assurance have been met by these engagement activities.⁶³ Our response to SRN2, above, considers ways in which companies can secure fairness between current and future customers.</p>
<p>U UW5: This is a new and untested regulatory mechanism and we anticipate there may be further queries, for example as we receive Ofwat's draft methodology in the summer. We are appreciative of the continued engagement with and from Ofwat, and others across the</p>	<p>We'll use our PR24 draft methodology consultation to help us develop our final methodology, which we'll publish in December 2022. We welcome responses to our draft methodology by 7 September 2022. We look forward to engaging further on long-term delivery strategies as part of the development meetings in early 2023.</p>

⁵⁹ Ofwat, '[PR24 and beyond: Final guidance on long-term delivery strategies](#)', April 2022, pp. 57-59.

⁶⁰ Environment Agency, '[Long-term water resources environmental destination: Guidance for regional groups and water companies](#)', October 2020, pp. 8-9.

⁶¹ Ofwat, CCW, '[Research on customer preferences](#)', April 2022.

⁶² As set out in Ofwat, '[PR24 and beyond: Customer engagement policy – a position paper](#)', February 2022.

⁶³ Ofwat, '[PR24 and beyond: Customer engagement policy – a position paper](#)', February 2022.

sector, as we all apply and mature our approaches to long term planning. We look forward to continued discussion in this area.	
--	--