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PR24 and beyond: Long-term delivery strategies and common reference scenarios. Yorkshire Water response

We welcome Ofwat's proposed approach to integrating long-term scenario planning into the price review process. Ensuring that the regulatory framework can support and encourage companies' ability to plan beyond the five-year price review process and align with environmental planning frameworks is critical to the future success of the industry in addressing the combined challenges of climate change, population growth and affordability.

While we are pleased that Ofwat has engaged the industry in the development of the proposed approach, we are concerned that there has not been sufficient time to develop the principles into a clear and workable practical application. It is evident that the current proposals are open to inconsistent interpretation across the industry and that further clarity and understanding is needed before the approach can be properly adopted and embedded in the price review methodology.

As it currently stands, the proposed approach represents a significant additional regulatory requirement, which obviously has associated time and resource commitments for both companies and Ofwat. While we strongly support the principles and objectives of the approach, we are concerned that without sufficient clarity in application, there is the potential for misfocussed effort and additional complexity in the price review assessment process. We note that where the regulator has previously introduced similarly extensive additional requirements to the business planning process, such as the creation of Performance Commitments and ODIs at PR14, Ofwat was unable to complete

a suitably comprehensive and timely assessment as part of the Risk-Based-Review, and as a result, the regulatory requirements changed significantly over the determination process. We note that Ofwat has subsequently opted to simplify the PC and ODI approach for PR24 to reduce the regulatory burden and streamline the incentives. We are concerned that, in the same vein as the PC and ODI approach at PR14, the practical application of the long-term planning and scenario testing requirements have not been sufficiently developed and scrutinised to allow for a consistent and meaningful industry response.

We strongly endorse the need for continued engagement with Ofwat, the industry and stakeholders, to ensure that the PR24 methodology provides a level of clarity that allows companies to produce long term plans which can deliver tangible improvements in the regulatory planning approaches for customers, the environment, and wider stakeholders.

In response to the discussion paper, we have summarised our key observations and suggestions. Further additional detail and methodological considerations are also provided in Appendix A, which expands on these points and introduces some of the more technical observations particularly around the common reference scenarios and links with the strategic planning frameworks.

Summary of key points

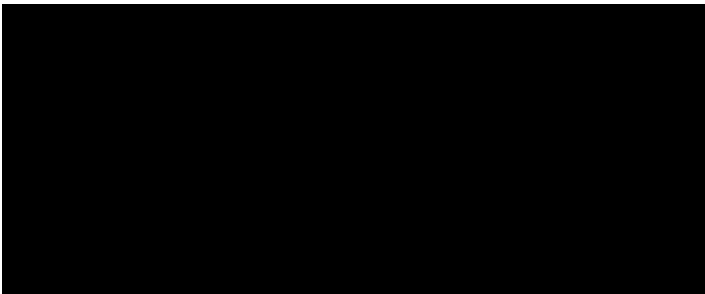
Lack of clarity about interpretation of requirements set out in the discussion paper: As demonstrated in the discussion at the workshop in December 2021, there is significant variance in the interpretation of the requirements between companies. The approach needs to be proportionate, with consistency across key elements in order that Ofwat can make use of the information provided. We support the suggestion of follow-on workshop(s) after the collation of the consultation responses and suggest that Ofwat provide a worked example to avoid proliferation of interpretation. This would also support the 'proportionate' objective, allowing Ofwat to assess the long-term plans as it intends, without undue regulatory burden for companies or regulator.

Exclusion of base activity from adaptive pathways: We are supportive of the need to take a systems-based approach to long term planning and on this basis are concerned that the proposal considers only enhancement activity in respect of adaptive pathways. This is not reflective of the entirety of the systems-based approach to long term planning and fails to recognise that much of the future uncertainty will also have a significant impact on 'day to day' activities. Base expenditure plays a critical role in maintaining or improving performance against a natural rate of rise or deterioration across the asset base. Put simply, the base level of activity and performance is not a steady state, companies need to run to stand still to achieve stable performance – how far and fast will be subject to the same factors included in the scenario testing, such as climate change and population changes. As Ofwat recognised at the PR19 Initial Assessment of Plans, Yorkshire Water has been at the forefront of developing a systems-based approach for resilience planning for the industry, and critical to that is recognising the interplay between base and enhancement activities.

Adaptive planning, trigger points and investment cycles: Having identified adaptive pathways based on specific trigger point criteria, it is inevitable that in the future trigger points will be reached earlier or later than anticipated. Unfortunately, it is unlikely that these will fit neatly into the 5-year regulatory cycle, as implied in the discussion document. We would welcome further consideration of how to adopt a more flexible approach to adaptive planning that recognises that if trigger points are reached in-period, a change in pathway may need to occur immediately. This would require a mechanism to allow companies to respond at that point in time, requiring consideration of the associated regulatory cost allowances.

We welcome the opportunity to discuss these points further with Ofwat and the industry in the development of the long-term planning approach, and look forward to further engagement in this area ahead of the publication of the draft methodology.

Yours sincerely



Director of Strategy and Regulation

Appendix A: Detailed response

1. Long-term delivery strategies

We welcome the move towards integrating the approach to long-term scenario planning into the price review process in a way that recognises that plans will need to be modified in the future as new information and circumstances come to light. We agree that the price review presents a sensible review point for long term planning.

The approach proposed by Ofwat however implies an increase in regulatory activity and submissions for companies in developing the core pathway and adaptive pathways as part of PR24. This contrasts with the simplified approach Ofwat have proposed in other areas of the plan, such as the performance commitments.

We acknowledge that long term planning could form part of the assessment of companies plans, as this provides a strong signal of the importance of the strategic approach. However, we would welcome much greater clarity on how approaches to long-term strategies will be assessed and incentivised as part of the PR24 review process.

Whilst Ofwat have identified parameters for consideration in the common reference scenarios, to create comparability, there is still a high potential for inconsistency in the way each scenario is applied by individual companies. This is likely to require additional regulatory analysis to ensure like for like comparison between companies.

We are supportive of the need to take a systems-based approach to long term planning and on this basis are concerned that the proposal considers only enhancement activity in respect of adaptive pathways. This is not reflective of the entirety of the systems-based approach to long term planning. Base expenditure plays a critical role in maintaining or improving performance against a natural rate of rise or deterioration and taking account of this is necessary for a systems based approach to long term planning.

We also note that the current proposal does not make specific reference to bioresources. The current policy position means that there is potential for significant change to the bioresource business model if it were to move away from application of sludge to land. This could result in requirement for significant investment over next 5 years which would materially impact both the short and long-term strategies. We would welcome further acknowledgement and development of how to address this in the scenario testing.

We are also mindful that there is a potential risk that the proposed approach could become overly complex. As demonstrated in the discussion at the workshop in December 2021, there is significant variance in the interpretation of the requirements between companies. The approach needs to be proportionate and consistent across the industry to ensure Ofwat can make use of the information provided. We propose that Ofwat provide a worked example

to avoid proliferation of interpretation and ensure the 'proportionate' clause is met in a way that allows Ofwat to assess the long-term plans as it intends.

1.1 Strategic planning frameworks

Ofwat has outlined how the long-term delivery strategy should bring together all other strategic planning frameworks. We see the benefits of this as an approach to the development of a consistent and holistic long-term strategy. For the next iterations of the WRMP29 and the DWMP29, there is an opportunity to ensure greater alignment between the strategic planning frameworks themselves and the common reference scenarios, particularly in respect of climate change.

Further, there are inconsistencies between the strategic planning frameworks which arise due to two key factors. Firstly, the nature of the frameworks and the risks that they address require a differing spatial and temporal application of data sets, for example population growth and rainfall. Secondly, due to the differing timelines, each framework uses the latest available information and data. These issues mean that, even within the strategic planning frameworks, the respective plans are not directly comparable. The introduction of common reference scenarios which introduces additional and different assumptions risks increasing the complexity.

1.2 Ambition

We are pleased that Ofwat have recognised that companies should take account of local circumstances in the strategic ambition and reflect the challenges and opportunities for their regions. As well as national and statutory planning requirements, regional stakeholders will play an important role in both shaping and helping to deliver the long-term plans. Alongside the Customer Forum, Yorkshire Water have recently established a Yorkshire Leaders Board, with representatives from all local authorities and partners, to help develop the long-term strategy. Working with our key stakeholders and partners in this way will ensure that our future plans are co-developed and embedded in the wider regional economic and development plans.

However, adopting this approach will require us to be flexible and recognise the uncertainty involved with working with a wide range of organisations. Not all councils plan regional development along the same time horizons, and priorities and ambitions can change over time. While an adaptive planning approach will support this, working with stakeholders over a long timeframe will inevitably require flexibility and reactivity outside the bounds of long-term planning. Ofwat sets out that company ambition should be informed by Environment Act targets. The timing of the formal regulatory targets under the Environment Act however limits how companies can incorporate these targets into the DWMP and thus the long-term strategy. For storm overflows regulatory targets will not be formally set by the Secretary of State until September 2022, this is three months after the draft DWMP has been published for consultation

in June 2022 and six months before the final DWMP publication in March 2023. The DWMP will inform the long-term plan to meet the Environment Act requirements to secure a progressive reduction in the adverse impacts of storm overflows. There is a risk that the timing associated with the DWMP strategic planning framework, and the publication of the WINEP driver guidance resulting from the Secretary of State's decisions around storm overflows could result in a mistiming between the DWMP and PR24 submission. Similarly, the timescales for the wider development of the WINEP do not fully align with the timescales for the DWMP. For example, WINEP 2 is scheduled for release in March 2023 at the same time as the publication of the final DWMP. We would recommend that for PR29 there is greater opportunity for the regulators to further align strategic planning frameworks and the periodic review cycle.

1.3 Strategy

Whilst we agree with an adaptive planning approach in principle, the statement presented by Ofwat regarding the intention to avoid unnecessary investment through traditional large infrastructure solutions developed based on uncertain assumptions, is an oversimplification. This does not reflect the realities of planning and delivering large infrastructure projects. The assertion that companies have overinvested in the past is a misleading misrepresentation.

Ofwat's Figure 2.1 may not always represent the "best value" or a technically feasible approach to dealing with resilience; in some circumstances, for example, it would be more efficient to deliver a single storage solution with additional capacity to cope with climate change or increasing demand, rather than incrementally increase capacity or build additional assets. For example, it is not economically or technically viable to increase the size of a reservoir incrementally to serve a gradually growing population. Preceding the construction of a reservoir elements of an adaptive plan can be delivered to reduce demand, such as reducing demand or investigating the possibility of water transfers, but when the trigger point is reached for a new reservoir, the infrastructure solution will be delivered using a conventional planning approach rather than incrementally. Conventional approaches should not be automatically excluded, and it cannot be assumed that incremental investment is more efficient or technically deliverable for all types of intervention.

Ofwat state that strategy should set out what the company will deliver in terms of key performance outcomes during the next 25 years. To ensure consistency and comparability, companies should set out key performance outcomes including key output metrics from strategic planning frameworks. Ofwat give the example of additional water capacity delivered and wastewater storage capacity delivered. In general, capacity delivered needs to be normalised against the population served for example to provide a comparable indication of service. Total volume is a suitable metric for regional targets of the WRMP, however for the DWMP the independent nature of the 600+ drainage catchments within the Yorkshire region requires a fundamentally different, bottom-up approach to solution development that do not have a common unit of measurement. The suggestion of wastewater storage capacity needs to be

reconsidered as there are wastewater solutions that are not in the form of storage, such as surface water removal. We would suggest that an overall risk level may be a more appropriate metric to provide comparison between companies once the DWMPs have matured and consistencies in methodologies further developed.

Adaptive planning, trigger points and investment cycles: Having identified adaptive pathways based on specific trigger point criteria, it is inevitable that in the future trigger point criteria will be reached earlier or later than anticipated and will likely occur mid regulatory cycle. Therefore, a flexible approach to adaptive planning needs to be considered, should a trigger be reached in-period, the expectation would be that a change in pathway occurs. This would require a mechanism to allow companies to respond at that point in time, requiring consideration of the change and associated regulatory cost allowances.

Core adaptive pathway and uncertainty: Following a long-term delivery strategy workshop, Ofwat clarified that core adaptive pathway should include investment necessary to meet future low scenarios. This is particularly relevant for climate change where the low scenario is widely recognised an unlikely outcome (UNEP Emissions Gap Report, 2021).

We consider that instead the 'most likely' scenario should be used and the investment necessary presented. It is appreciated that trigger points would enable companies to move to a higher scenario if required, however the timing of such reviews might mean companies are underinvesting for the first 5 years if in-period trigger point reviews are not appropriate as discussed above. It is unreasonable to assume that prediction of future events compared to actual measurements is always skewed to the downside.

Furthermore, as providers of essential public health services, we are concerned that there may be negative public perception that the default basis for long term planning is only for low case scenarios, especially for climate change.

1.4 Rationale: best value

Ofwat have proposed an approach for establishing best value pathways that consider environmental and social impacts, in line with Ofwat's strategic planning framework for PR24 expectations, public value principles and WINEP options and appraisal guidance. Companies are asked to set out how the long-term objectives will be achieved over the next 25 years in the best value way.

We welcome the approach for incorporating best value into the long-term strategies of companies. There is however inherent uncertainty in knowing what would deliver best-value, especially when considering 25-year future scenarios. Given the rapid evolution and role of technology, significant assumptions will need to be made about option availability and costs for solutions within the

¹ UN Environment Programme 2021 Emissions Gap Report. Online, available at: <https://www.unep.org/resources/emissions-gap-report-2021>

future. Assuming the solutions available now present the best value options in 25 years, would be incorrect. We would expect that the review of such assumptions is a key component of future price reviews, allowing for technology and knowledge advances to be fully considered.

Similarly, the potential opportunities afforded by technological developments are equally (if not more so) relevant for base expenditure and maintenance activities, and so we would encourage Ofwat to reconsider only limiting the approach to enhancement activities.

In terms of the methodology proposed to derive best value, the interpretation and application is likely to vary across the sector. At Yorkshire Water we use our corporate decision-making framework to develop best value solutions using a six capitals approach, as previously set out in Chapter 9 of our PR19 Business Plan². This aligns with, but does not mirror, Ofwat's proposed approach. Given the current early development of approaches, we ask Ofwat to consider allowing companies to use alternative approaches in this instance, with any specific requirements to be agreed with the quality regulators ahead of PR29.

1.5 Foundations: Performance improvements from base expenditure

Ofwat have noted that companies will deliver performance improvements over time through their base cost allowances and ongoing technological improvements. Ofwat have asked for companies to develop their own forecast of improvements expected from base expenditure to inform draft plans.

This contrasts with the Assessing Base Costs paper where Ofwat sets out the approaches it is considering to identifying “what base buys”. If companies are asked to make their own assessments, there is likely to result in a wide range of approaches and improvement levels that could vary significantly from Ofwat's.

Rather than suggesting that companies present differing assumptions about performance improvements in base, a standardised service improvement could be developed and applied across common performance commitments and scenarios. As productivity can be measured as a combination of cost reduction and service improvement, perhaps for long term targets a frontier shift assumption could be applied to indicate long term service improvements.

Improvements from technology: Ofwat note that companies' ambitions for the level of performance outcomes should be informed by factors including ongoing service improvements made over time due to technology and process improvements.

As technology improvements form part of companies' efficiency over the long term, there needs to be recognition for the upfront cost required to develop and

² Chapter 9: Decision efficiency, Yorkshire Water PR19 Business plan 2018. Online, available at: https://www.yorkshirewater.com/media/hlonqv24/yorkshire-water-pr19-business-plan-submission-document_0.pdf

deploy these technologies, but also the reinvestment frequency implied by technology investment due to shorter asset life. Technology improvements are often associated with understanding the need for investment, rather than the solution itself. For example, improved rainfall modelling might allow companies to refine the use of low-tech sustainable drainage options, or deployment of sewer sensors to allow operational response time to avoid a flooding incident. Consideration should also be given to the fact that replacement technology quite often brings an increased cost over the original investment but may provide additional functionality to the user. Real world examples include computers and smart phones.

2. Customer engagement

There are inconsistencies between the customer engagement expectations set by Ofwat for PR24. The timing of the centralised research being conducted by Ofwat and CCWater, due to be published in December 2022, will make it difficult to ensure alignment between our five-year plan and long-term strategy. It is also unclear how the scope of the current centralised research programme will support the development of the long-term strategy and therefore what research is expected of companies in addition to this.

Whilst we support customer and stakeholder engagement throughout the PR24 process, it is unclear how Ofwat will measure the effectiveness of this engagement for both the long-term strategy and the PR24 business plan more generally.

The long-term strategy consultation places emphasis on many aspects of customer involvement, such as behaviour change and intergenerational fairness. We support this; however, the approaches companies take to implement this is likely to vary considerably. Guidance from Ofwat as to how this will be measured and assessed between companies would support the development of approaches taken.

3. Data tables

The data table presented as part of this consultation lists the enhancement drivers used at PR19. This should be reviewed to ensure that any new enhancement drivers emerging at PR24 (if applicable) are correctly captured and reflected.

4. Programme

If the common reference scenarios are not confirmed until summer 2022, and Ofwat makes significant amendments or adds new scenarios, this will present a challenge for companies to complete assessments in time to submit a high-quality long-term plan at the point of submission of PR24 business plans. Therefore, to support companies in the development of their long-term

strategies, it is requested that the common reference scenarios and the proposed methodology are provided by Ofwat earlier than summer 2022.

5. Scenarios

5.1 Climate change

Whilst we agree that companies should assess their risks from a changing climate, we note that the suggested scenarios do not align with the advice, guidance and methodologies issued by the Environment Agency and others. We also note that the suggested Ofwat scenarios do not align with the guidance for adapting to climate change for Risk Management Authorities such as water companies, as defined by the Flood and Water Management Act.

In line with the UNEP Emissions Gap Report 2021 we also challenge whether expending resources assessing the risk from a very low emissions scenario (RCP2.6) is worthwhile as even an optimistic assessment of COP26 outcomes does not align with RCP2.6. We suggest that Ofwat do not need to prescribe which climate change scenarios to use as this is already included in much of our regulatory guidance as issued by our other regulators such as the EA, DWI and NE, or is in the process of being developed and agreed by the industry with support from academic partners such as Future Drainage, and UKWIR.

The approach set out by Ofwat in section 3.2.1 refers to guidance differing from that used for the WRMP and regional plans. For regional plans, it has been recognised that it makes sense to use spatially coherent climate change projections, so that they are valid across the UK. Companies and regions have therefore generally used the regional models, and as these are only available at RCP8.5, the analyses have been done using RCP8.5 and then for most regions these have been scaled to RCP6 using equations developed by Atkins for the regional groups. Many companies have used the probabilistic scenarios to put the results into context, as it is recognised that the regional models are hotter and drier than the probabilistic models, and many of the other scenarios. We have chosen to use RCP6 as it seems the most likely emissions pathway, although we have included uncertainty in our modelling. We have not modelled future water supply or demand in a low emissions scenario as this is not in line with our regulators' published methodology.

Future Rainfall: Due to the timing of information available for the DWMPs and WRMPs, it is unlikely that Ofwat's low emissions scenario can be reflected in either plan.

For DWMPs, we require sub daily rainfall data for the 2050s and 2080s which was not available from UKCP18 at the time needed to start the plan modelling work. We have therefore used bespoke uplifts based on UKCP09 high emissions scenarios which were commissioned from HR Wallingford. Our draft DWMP will be published in June 2022 and as previously mentioned, there is insufficient time to repeat this with Ofwat's proposed low emissions scenario. In addition, there is considerable academic and industry effort already underway to develop suitable datasets based on the convection permitting 2.2km climate projections from UKCP18, however these will not be available until the second

round of DWMPs. The NERC funded FUTURE Drainage project was commissioned in 2019 to convert UKCP18 into more “useable” data however the outputs from this project was not published until 22nd July 2021. This date was too late for inclusion in the current DWMP modelling, which was ongoing for the previous 18 months (in running the baseline and design horizon scenarios). The FUTURE Drainage project does provide suggested uplifts for Design Storm events but does not cover how to perturb data sets to create updated Time Series Rainfall for future epochs. We recognised this issue and suggested an UKWIR project, which has commenced to update the RedUP tool, which will enable us to generate these time series.

We are on the steering group for this project. However, we will not be able to trial this revised RedUP tool until March- April 22 which is too late to incorporate into the DWMP planning.

WRMP24 is based on UKCP18 RCP8.5 scaled to RCP6 and our DWMP24 is based on UKCP09. The draft WRMP is due to be submitted in October 2022 and the draft DWMP is due to be submitted in June 2022, therefore it is not possible to consider Ofwat’s proposed low emissions scenario in either plan.

Flood risk: As a Risk Management Authority (RMA) under the Flood and Water Management Act, we are subject to the EA guidance Adapting to Climate Change³. This guidance contains uplifts for peak river flow, rainfall intensity and sea level rise for use in flood risk assessments and solution design based on UKCP18 RCP8.5 and does not align with the scenarios suggested by Ofwat. The EA guidance for sea level rise in particular guides RMAs to use the 70th percentile of RCP8.5 as the design allowance which contrasts with the 50th percentile of RCP2.6 or RCP8.5 as suggested in the Ofwat document.

We also note that national flood risk maps for both pluvial and fluvial flooding do not currently include the impact of climate change which makes it difficult to assess future flood risk under any climate scenario. We suggest that water company customers should not pay for national flood risk maps as this is a data set that should be provided by the EA.

5.2 Technology

The technologies provided and delivery dates are very specific and assume that they will all deliver greater efficiency. It is however unlikely that every innovation will lead to improved efficiency. For example, in the high technology bracket:

“3) New wastewater approach by 2040: • satellite monitoring and advance forecasting of localised surface water rainfall and related pollution/wastewater stresses, enabling rapid response and/or prior action; and • automatic monitoring and enhanced sampling of environmental water quality.”

It should be recognised that technology leading to a more rapid response may not always deliver improvements without enhancement interventions. For

example, if network capacity is the challenge, then in some catchments knowing it is going to rain and fill the network does not necessarily mean there is a rapid response plan that can prevent flooding. In these occurrences longer term improvements will be needed to address the capacity of the network either through surface water removal or increased network capacity in the form of storage or conveyance. Increased data and understanding can ensure that the right interventions are made over time to achieve the required outcomes.

5.3 Demand

Sensitivity analysis has been undertaken for different growth predictions as part of the strategic planning frameworks. Indicative feedback from our local authority stakeholders suggests that, contrary to Ofwat's high growth scenario, the Yorkshire region local authorities expect to meet (if not exceed) their local plan targets for population growth. As a result, it is possible growth could be underestimated. In line with Water Resource Planning Guidelines the reference scenarios should allow for a growth higher than the current published local plans if there is evidence from local authorities to suggest they are no longer representative.

There is however the need for companies to understand not only total growth, but the location of growth, i.e., evenly distributed growth compared to growth in targeted areas. Understanding the implications of growth as part of the adaptive pathway will add further complexity to the long-term delivery strategy. The observations on growth also relate to the use of low scenarios on Core Adaptive Pathway and Uncertainty.

5.4 Environmental Ambition

It is noted that the environment long term reference scenario focuses on water abstraction and there are no wastewater environment long term reference scenarios. We are assuming this is because these areas are typically considered as part of WINEP planning and are therefore delivered within the quality programme as required. The move to longer term horizons for WINEP planning will support the overall ambition of having a longer-term focus within price review planning.