



Statement of Response to Draft Water Resources Management Plan 2019 consultation

September 2018

It's part of our
Blueprint for Yorkshire

1. Introduction

We published our Draft Water Resources Management Plan 2019 (Draft WRMP19) and the Strategic Environmental Assessment of our plan for consultation on 9 March 2018. This document sets out how we have taken account of consultation responses and the changes we have made to our draft plan.

Statutory consultees and interested parties most likely to be affected by our plan were notified of the consultation directly by email. We produced both technical and non-technical summaries of our plan and a short animation YouTube video, promoting our consultation through multiple media routes to increase engagement with our customers. We increased our use of social media, with promotions on platforms such as Facebook, Twitter and LinkedIn to engage with a wider audience than those reached through traditional media.

We also discussed our draft plan with our independent customer challenge group, the Yorkshire Forum for Water Customers. The Forum was set up in 2012 and is made up of key groups in Yorkshire who collectively represent Yorkshire Water's customers.

In response to this consultation we received a number of representations on our Draft WRMP19 and Strategic Environmental Assessment. Representations were received from our regulators Ofwat, the Environment Agency and Natural England, Historic England, Canal & River Trust, three local councils and two members of the public.

Following the consultation, we have produced a revised draft WRMP19 ('revised plan') and Strategic Environment Assessment of our plan which we have published with this Statement of Response.

We have considered each of the comments made in the representations and how we should address them. Section 2 provides our response to each individual issue, stating if the issue has led to a change in the revised plan.

There are a number of key themes included in the representations received. These are:

- Assessment of deployable output and the impact of climate change
- Company preferred solution – development of costs and options and decision making
- Bulk supplies and third-party transfers
- Environmental assessment of options (Strategic Environmental Assessment)
- Resilience to factors other than drought such as flooding and other hazards
- Compliance with the Water Resources Management Plan (England) Direction 2017

The Environment Agency provided a number of recommendations and improvements in their representation. Our response to these have been included in this statement of response. In addition, the Environment Agency suggested improvements to the quality, consistency and customer understanding of the plan. We have not included details of these minor issues in our statement of response, but all have been addressed in the preparation of our revised plan.

2. Response to draft WRMP19 consultation comments

Environment Agency consultation response

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| Environment Agency Recommendation 1: Ensure the plan is legally compliant by adhering to the WRMP Directions | | |
| <p>R 1.1</p> <p>Direction 3(b) - Describe the annual average risk of all restrictions as a percentage, and how they change through the planning period</p> | <p>The company has not stated the average annual risk that it may need to impose temporary water use restrictions and ordinary drought orders as a percentage as required by Direction 3(b). The company has not provided a description of how the annual average risk of all restrictions changes through its planning period.</p> | <p>To comply with this Direction, we have included annual risk of restrictions (as a percentage) as well as the base-year and end-year risks in the revised plan (see section 3.5).</p> |
| <p>R 1.2</p> <p>Direction 3(c) - Describe the assumptions it has made to determine the annual average risk of all restrictions</p> | <p>The company has not provided the annual average risk for temporary use restrictions and ordinary drought orders. It has therefore not provided the assumptions used to estimate the annual average risk of imposing all levels of restrictions as required by Direction 3(c).</p> | <p>To comply with this Direction, we have clarified the assumptions used to estimate the annual average risk in the revised plan. (see section 3.13.9).</p> |

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| <p>R 1.3</p> <p>Direction 3(e)(i) Describe the assumptions made regarding the implications of climate change, including in relation to the impact on each of its supply and demand measures</p> | <p>The company has provided an estimation of the impacts of climate change on its future demand and supply forecasts. However, it has not described the impacts of climate change on each of its options in the final planning scenario. This is required by Direction 3(e)(i)</p> | <p>We have described the impacts of climate change on each of the options in the final planning scenario in the revised plan (see section 12 of our revised plan).</p> |
| <p>Environment Agency Improvement 1: Clarify and improve approaches used to estimate deployable output and water availability</p> | | |
| <p>I 1.1</p> <p>How supply was calculated</p> | <p>In developing its supply forecast, the company has continued to use methods utilised in previous plans. However, more current methods could be adopted.</p> <p>Yorkshire Water has used Environment Agency (EA) (1997) "Reassessment of Water Company Yields" as the basis for this submission and the EA/UK Water Industry Research (UKWIR) WR27 Water Resources Planning Tools 2012 Water resource zone (WRZ) assessment framework.</p> <p>For groundwater assessments, the company uses "A methodology for the determination of outputs from groundwater sources" (1995), "A unified methodology for the determination of deployable output from water sources" (2000), and "Critical period groundwater</p> | <p>The more up to date documents - <i>Handbook of Source Yield Methodologies</i> (UKWIR, 2014) and the <i>Risk-based planning guidance</i> (UKWIR/Environment Agency, 2016) have been used and are referred to in our revised plan. We have followed a risk-based approach and would only use more complex methods where the risk indicated it was required.</p> <p>The 2016 UKWIR/ Environment Agency risk-based planning guidance was used in the preparation of our supply forecast and it is referenced in our revised plan. We also use the <i>Water Resources Planning Tools</i>, (UKWIR, 2012), as the Water resource zone definition is provided in this earlier document.</p> <p>In addition to the older methodologies, we use methodologies referred to in the <i>Handbook of source yield methodologies</i> (UKWIR, 2014). We have used more recent methodologies where appropriate, according to our risk-based approach.</p> |

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| | yield" (2001) | |
| <p>I 1.2 Misleading or Incomplete Information in WRMP19 tables: more than 2.5% difference between sum of the micro-components and reported per capita consumption (PCC) values</p> | <p>For the final plan unmeasured households, the sum of the micro-components of demand differs by more than 2.5% compared to the reported unmeasured household PCC.</p> | <p>This was a spreadsheet calculation error that has been corrected in the water resource planning tables.</p> |
| <p>I 1.3 Consistency between model and planning tables</p> | <p>The Deployable Output-Climate Change Technical Report (page 13) notes that the demands and profiles used in the company's WRAPsim model for the deployable output model runs are not the dry year annual average demand used in the WRMP planning tables</p> | <p>The demand used in the planning tables is the Dry Year Annual Average (DYAA) demand.</p> <p>The demand used in the WRAPsim model is the highest demand that can be met whilst still meeting our levels of service - our deployable output demand. A monthly demand profile is used based on analysis of historic demands.</p> <p>We have followed guidelines - deployable output demand is not the same as DYAA demand - by definition (or there would never be a supply demand surplus). We have explained this more clearly in our deployable output technical supporting document and revised plan.</p> |

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| <p>I 1.4 Delivery of water industry national environment programme (WINEP) and deployable output implications</p> | <p>The WINEP is an evolving programme. Any outcomes of investigations or additional impacts on Yorkshire Water’s supply should be incorporated into the water resource management plan promptly.</p> | <p>We have worked closely with the Environment Agency to understand the implications of the WINEP. From this work, we now know that sustainability reductions will not cause a deficit in the WRMP19 baseline scenario in either of our zones. Further investigations are required in AMP7 to understand sustainability reductions at a number of groundwater and river abstraction licences. The investigation profile is early AMP7 to inform the development of WRMP24. We have run some scenarios looking at the impacts on supply. However, in agreement with the Environment Agency we have not identified any supply demand scenarios based on these potential licence reductions.</p> |
| <p>1.5 Abstraction licence constraints</p> | <p>The Deployable Output-Climate Change Technical Report (page 16) states that, within the WRAPsim model, "Abstraction licences are obeyed within annual quantities."</p> | <p>The technical report states " Abstraction licences are obeyed within annual quantities. In addition, where abstraction quantities are linked to flow or reservoir storage these rules are also obeyed." We have clarified that this also means daily quantities are adhered to. The WRAPsim model is run at a weekly timestep, but the model ensures that daily quantities are adhered to, as well as hands off flows for river abstractions.</p> |

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| <p>I 1.6 Modelling clarity</p> | <p>Behavioural analysis modelling (using the WRAPsim model) has been used for the Grid Zone.</p> <p>For the East Surface Water Zone (SWZ) the modelling approach is unclear. It may be that the company is using WRAPsim or simply defined by water treatment works maximum capacity.</p> <p>Text in the relevant technical report indicates that groundwater deployable outputs are fixed and assumed not to vary with drought severity. This is acceptable where the source is licence or infrastructure constrained, for example Sherwood Sandstone sources. However, the Hull Chalk is resource-constrained and modelled as a reservoir therefore should be perturbed in line with surface water</p> | <p>We have clarified that for the East SWZ the deployable output is defined by the water treatment works capacity in our base year. We do model the zone in WRAPsim, but the limiting factor is the treatment works capacity. For climate change scenarios, with flows reduced, the water treatment works is no longer always the limiting factor. We have explained this more clearly in our revised plan (section 3.4.2) and supporting documents.</p> <p>We have clarified our approach for the Hull Borehole Group, referencing the <i>Handbook of source yield methodologies</i> (UKWIR, 2014), where this approach is cited as an exemplar of good practice (section 3.4.2).</p> |

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| <p>I 1.7 Inclusion of drought measures in deployable output</p> | <p>The company appears to include the benefit of supply-side drought measures (drought permits or orders) in its deployable output modelling but states this doesn't provide a benefit to zonal deployable output.</p> <p>The company should explain why drought measures have been included - contrary to guidance - when the same zonal deployable output is achieved with these "switched off".</p> <p>The company should also explain why deployable output is not affected by switching these measures on or off.</p> <p>Where companies have included the benefit of drought permits and orders in the baseline we request they are removed and the deployable output benefit is instead reported in planning table 10. It may also be appropriate to consider drought permits and orders within the options appraisal for the plan.</p> <p>The company should provide clarity should on the deployable output implications of assessing the period of record versus the 1995/96 drought as a standalone event.</p> | <p>We included these in our draft WRMP19 so that our model is representative of our actions during a drought, and consistent with our Drought Plan. We explained that the result of switching these measures off is a reduction in reservoir stocks and not an increase in deployable output, due to the way we calculate deployable output in relation to our levels of service.</p> <p>We have expanded text in our revised plan, explaining how we calculate deployable output using the explicit failure method described in the <i>Handbook of source yield methodologies</i> (UKWIR, 2014).</p> <p>We have now excluded supply-side drought measures from our deployable output model in response to the Environment Agency's concerns but note that this now means our WRMP and drought plan are less aligned than previously.</p> <p>This has no effect on our modelled deployable output, as the same levels of service triggers are crossed, but modelled reservoir stocks are lower.</p> |

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| <p>I 1.8 Drought resilience</p> | <p>The planning to a worse drought than that seen in the historic record is stated multiple times based on deployable output being lower than if the 1995/96 drought were modelled on its own. The difference in deployable output between these scenarios appears to be 1.8%.</p> | <p>This is explained in section 3.6.2 of our revised plan.</p> <p>Our assertion that we plan to a greater level of resilience is not just based on the difference between the deployable output assessment of the single 1995/96 drought and our entire period of record based on levels of service, but also on the fact that we estimate our deployable output based on our levels of service, and not to a worse failure metric such as emergency storage. This assertion is also supported by the Water UK <i>Water Resources Long Term Planning Framework</i> report.</p> |
| <p>Environment Agency Improvement 2: Provide further clarity on the company’s resilience to droughts and alignment with its drought plan (linked to Directions 3(b) and 3(c))</p> | | |
| <p>I 2.1 Presentation of Level of Service assessments</p> | <p>Although the water resource management plan sets out the company's stated Level of Service (Table 3.3), the presentation of potential Temporary Use Bans (TUBs) by reservoir group (Table 3.5) implies more frequent restrictions and casts doubt on the integrity of the Grid Water Resource Zone.</p> <p>With reference to the company’s draft Drought Plan, Yorkshire Water’s position is to apply TUBs only when multiple reservoir groups are stressed and then to apply those TUBs across its supply area</p> | <p>In our revised plan we have clarified the difference between TUBs being triggered in our 5 area reservoir groups and being implemented (generally only when triggered in regional group or 3 or more area groups).</p> <p>In addition, in our definition of deployable output we allow TUBs to be triggered 3 times in any one area, even if they would not be implemented as they had not been triggered in 3 or more areas. This is because in practice if TUBs were triggered in only one or 2 areas we would operate to balance stocks, but our deployable output model is calibrated across the entire period of record so does not reflect mitigating action in individual years.</p> |

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| <p>I 2.2 Design drought return period</p> | <p>It is not clear how some of the return periods of events in planning table 10 have been estimated. Where a method has been stated as being used, the justification of this method has not been provided. For the Grid WRZ, the deployable output is constrained by the frequency of crossing drought trigger lines and it appears from planning table 10 that 1995/96 is the worst historic drought with a quoted annual likelihood of occurrence anywhere between 0.1% to 1% (but with 0.4% as the best estimate).</p> <p>For the East SWZ, 1976 is presented as the worst historic drought with a probability of 1% stated. The company should provide justification for the severe and extreme droughts selected and explain why the outcome of the drought response surface was not taken into account.</p> <p>Tabony tables have been used to estimate drought return periods, though these are widely regarded as over-estimating the return periods for droughts.</p> | <p>We have clarified this in the revised plan.</p> <p>We have explained uncertainties in return period analyses so as not to imply certainty where it does not exist. However, we do believe we have demonstrated resilience, and supported this by reference to the <i>Long Term Water Resources Planning Framework</i> (Water UK, 2016) which describes us as one of only two companies that plan for droughts worse than that already seen.</p> <p>We have revised our return period analyses based on reservoir inflows to ensure consistency between Water Resources Planning Table 10 and our drought response surfaces.</p> <p>We have supplied justification for the severe and extreme droughts selected in our revised plan. We believe we have taken the outcome of the drought response surface into account and have added a figure to show the severity of the droughts selected based on percentage of long term average (LTA) inflows.</p> <p>We used Tabony Tables and other return period analyses, as recommended in the Environment Agency document <i>'Exceptional shortage of rain. Principles for the assessment of drought orders and permits'</i>.</p> <p>We have described these analyses more fully and explained the reasons for our choices in our revised plan.</p> |

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| <p>I 2.3 Drought selection</p> | <p>The drought response surface and the planning table 10 droughts are not coherent, with tested droughts not necessarily corresponding to events that could fully test the resilience of the system. See for example Figures 3.3 and 3.4 in the plan.</p> | <p>We believe our drought response surfaces are consistent with Water Resources Planning Table 10, and severe droughts have been tested. We have explained this more fully in our revised plan and have used the new drought response surface tool which allows axis labels to be changed, so that the label matches the text in our documents, explaining that the drought response surfaces shows period below our drought control line (DCL), not abnormal restrictions.</p> <p>For consistency with other companies, we have provided response surfaces for periods of abnormal restrictions instead of ordinary drought orders in our revised plan. However, due to our high level of resilience, we will continue to also produce surfaces of period below drought control line, but these are now only included in our Technical Report on Deployable Output and Climate Change.</p> <p>We have added sections on return period analysis and drought selection (3.7.1 and 3.7.2 in our revised draft plan)</p> |
| <p>I 2.4 Incomplete drought analysis</p> | <p>Drought response surfaces work appears to be inconsistent across different return periods, as there would be 12 months of restrictions in an 18 month long 1 in 1000 year drought, but no restrictions in a 12 month 1 in 1000 year drought (Figure 3.4).</p> <p>One of the response surfaces appears to show the company needing to implement abnormal demand restrictions for around 6 month during a 1 in 200 year return period 18</p> | <p>There are a number of reasons for this apparent inconsistency. The 18-month drought ending in November is a different event to a 12-month drought ending in November, so the same restrictions would not necessarily apply in the shorter event. The 12-month droughts are from December to November, and the 18-month droughts are from June to the following November.</p> <p>Because our return period analyses are based on our historical data, and we have had an extremely severe 20-month drought, our worst 18-month drought is 65% of the</p> |

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| | <p>month drought and for around 12 months during a 1 in 500 and 1 in 1000 year return period 18 month drought. This is inconsistent with information presented elsewhere (for example, planning table 10) and the quoted 1 in 500 year Level of Service for emergency drought order customer restrictions.</p> | <p>average year, and our worst 12-month drought is 66% of the average year. Usually we would expect droughts of greater duration to be a higher percentage of the average, but the fact that we have had an extreme 2 season drought means that this is not the case.</p> <p>A December to November drought of return period 1 in 1000 years is a more severe event in terms of rainfall or inflow deficit relative to long-term average than a 1 in 100 year return period 18 month drought.</p> <p>We have expanded on our return period analyses in our revised plan.</p> <p>The drought response surface (DRS) in our plan does not show abnormal demand restrictions, but a period below drought control lines (ordinary drought permits or orders). This was explained in the text of our draft WRMP19, but the axis labels showed abnormal restrictions. We have now changed the axis labels (which can now be done in the new DRS climate change tool) and provided a drought response surface for abnormal restrictions (see response to I2.3).</p> |
| <p>I 2.5 Completion of planning table 10</p> | <p>All sections of planning table 10 have not completed for the East SWZ. In addition, the company provides limited commentary in table 10 for this zone too. Table 10 for the Grid zone also lacks some key details.</p> | <p>We have added detail to Water Resources Planning Table 10 for the Grid and East SWZ for the revised plan.</p> |

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| <p>I 2.6</p> <p>Failure metrics</p> | <p>The failure metric is included in the “demands” section of table 10.5 summary report (Grid WRZ table 10).</p> <p>The metric used is the number of level of service restrictions being imposed.</p> <p>The company should enter failure metric data in the overview section for clarity.</p> <p>Individual droughts could be modelled with failure defined as failure to meet demand or a reservoir reaching emergency storage.</p> <p>To show the benefits of interventions separately in a single event, these events could be modelled:</p> <ul style="list-style-type: none"> - without TUBs, demand restrictions or drought orders; - with just TUBs and demand restrictions; and - with TUBs, demand restrictions and drought orders. <p>Potentially modelling individual scenarios and assessing failure based on either failing to meet demand or a reservoir reaching emergency storage (MSL) would provide more clarity on resilience to different severity droughts. The company should undertake this additional work and provide a summary</p> | <p>We have defined failure for individual droughts as more than 3 areas trigger TUBs. We could achieve a higher deployable output by using emergency storage as our failure metric, but we have chosen our level of risk, and define our deployable output according to levels of service. Defining deployable output according to emergency storage would lower our resilience to droughts. We consider failure defined as failure to meet demand or reservoirs reaching emergency storage as too low a threshold.</p> <p>We have added failure metric data in the overview section of planning Table 10 for clarity.</p> |

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| | of results in its revised plan. | |
| I 2.7 Unrestricted demand | It is not clear how the unrestricted demands listed against each of the droughts reported in table 10 have been estimated and whether they reflect the anticipated levels of demand that might be associated with each event. | We have clarified in Water Resources Planning Table 10 and within the revised plan. The demand is the deployable output for each scenario and is not the demand expected in such an event. |
| Environment Agency Improvement 3: Clarify bulk supply arrangements with new appointees and neighbouring water companies | | |
| I 3.1 Severn Trent Water import volume | The plan is not clear about whether the import volume from Severn Trent Water is included within the supply forecast modelling. The summary identifies that the best value plan for Severn Trent Water identifies a reduction to this import of 15 Ml/d in 2030. As Yorkshire Water states this isn't possible until 2035, feasibility allowances have been planned for AMP7 (2025). Yorkshire Water's planning tables suggest the company has made no allowance for this reduction from 2030 or 2035. | Our modelling of the Severn Trent Water import is included in section 3.15.1 of our revised plan. We have expanded the detail to clarify that the Severn Trent Water import is included in our modelling. The import is shown in WRP planning table 1BL supply. We have met with Severn Trent Water and agreed the modelling required to investigate any changes in the import. Severn Trent Water have confirmed they no longer need to reduce our import in 2030, and we have committed to working together to identify the impacts of any changes in the operation of the Derwent Valley reservoirs. |
| I 3.2 | The water resource management plan does not discuss variations to contractual | The contract between Yorkshire Water and Severn Trent Water sets out how transfers will vary during different |

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| Water transfers - drought reductions | arrangements such as decreases in transfers due to drought. | conditions, including how they will decrease during periods of prolonged dry weather. Under a drought scenario, we would operate in accordance with those contractual arrangements, and if we are able, we will reduce our take, as long as it does not adversely affect our supply to customers or increase the likelihood of drought measures being required. |
| Environment Agency Improvement 4: Improve its Strategic Environmental Assessment (SEAs) to understand the impact of the company's proposed options on the environment | | |
| <p>I 4.1 Non-Technical Summary (NTS)</p> | <p>The Non-Technical Summary (NTS) provided fails some of the criteria set out in the relevant Regulations, specifically Schedule 2, paragraph 10 which requires the NTS to include information as set out in Paragraphs 1 to 9.</p> <p>Information on Paragraphs 2, 3 and 7 is not provided and is weak for Paragraphs 4, 6 and 9.</p> <p>Addition of a location plan would aid understanding of the scope of the SEA.</p> <p>The NTS is very high level and provides no information on the demand- or supply-side options being considered or their environmental effects.</p> | <p>The NTS has been expanded to provide more detailed information relating to Paragraphs 2, 3, 4, 6, 7 and 9 of the Environmental Assessment of Plans and Programmes Regulations 2004.</p> <p>A figure displaying the assessment study area with the approximate location of schemes and a table that summarises the environmental effects of schemes in the plan have been added.</p> |

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| <p>I 4.2 Baseline environmental information</p> | <p>The current state of the environment and evolution data is only provided for Sites of Special Scientific Interest (SSSIs). Future evolution of the environment in the absence of the plan is largely not discussed. Although 'key issues' are clearly identified, these do not relate specifically to future evolution. Section 4 notes difficulties inherent in attempting to predict the evolution of the environmental baseline over the very long timescales required for a water resource management plan.</p> | <p>WRMP options for implementation beyond 2025 will be further assessed for WRMP24, which will also be subject to SEA. This process is currently repeated every five years, and it is assumed this will continue into the future. This regular statutory update and review will ensure that actual changes to the baseline and updated forward projections can be considered in subsequent WRMPs and SEAs. Sections 4.3 and 4.4 of the SEA Environmental Report have been amended to provide further clarity on this issue.</p> |
| <p>I 4.3 Existing environmental problems should be identified and used to inform the SEA objectives and assessment.</p> | <p>The water resource management plan states that Habitats Risk Assessment (HRA) screening has been carried out and summary conclusions are provided in a number of Options Assessment matrices in Appendix E of the plan.</p> <p>It is not stated if the water resource management plan has been screened against the Birds Directive although Special Protection Areas are identified in Appendix D tables and figures.</p> | <p>A section has been added to the SEA Environmental Report that summarises the outcomes of the HRA Screening.</p> <p>Section 1.4 of the SEA Environmental Report has been updated to clarify that the HRA included the consideration of Special Protection Areas designated under the Birds Directive.</p> |

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| <p>I 4.4 Eels</p> | <p>No evidence is provided within the plan to describe the eels work (either past work meaning no further work needed or new works planned). There also appears to be no reference to eels in the SEA report (though there is mention of associated regulations in the SEA Appendices).</p> | <p>The Eels (England and Wales) Regulations 2009 are cited in Appendix C of the SEA. Appendix D provides an overview of the environmental baseline, which includes consideration of eels. As described in Section 4.6 of the Environmental Report, key issues arising from the review of baseline conditions for each of the SEA topics are summarised in Table 4.1. These key issues have been used to support the development of the SEA objectives in Section 5 and resultant assessment of all options. All options have been assessed to the same level of detail, in line with the SEA legislative requirements, national SEA guidance and the UKWIR SEA guidance. The level of detail for the environmental assessment of each option is consistent with the strategic nature of SEA. This is a high-level, strategic assessment, carried out without the detailed information which would be support an EIA.</p> <p>However, to address the comment that Yorkshire Water should provide detail of past, current and planned future works to demonstrate actions to comply with Eel Regulations are being taken, additional information is provided in SEA Appendix D, Section 1.1.2 as follows: During AMP5 (2010-2015) the Environment Agency have reviewed the compliance of relevant assets such as river intakes, against the 2009 Eels Regulations, which seek to reverse the rapid decline in eel populations over recent years. The Regulations aim to achieve 40 percent escapement of adult eels relative to the level of escapement under pristine conditions. As a result of this review, we were served notice to deliver solutions to prevent eel impingement and entrainment</p> |

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| | | <p>at three of their river intake sites as a matter of high priority (i.e. solutions delivered by 2020). Specialist aquatic and fish engineering consultants APEM Ltd were commissioned to undertake an independent review of compliance and confirmed that the intake screens at two of the sites were partially compliant with the Regulations, and therefore only relatively minor modifications were required. The schemes of work at both these sites are to be delivered during 2018/19. The third site requires a much bigger scheme to ensure compliance with the Regulations. This scheme is being investigated and designed during 2018/19, for construction during 2019/20.</p> <p>No further Yorkshire Water assets have been identified as being non-compliant by the review and so no further schemes are expected to be delivered during AMP7 and beyond.</p> |
| <p>I 4.5 Local wildlife sites</p> | <p>It is not clear whether the company has fully taken on board comments from Natural England about inclusion of local wildlife sites as well as formally designated sites.</p> | <p>Local wildlife sites (LWSs) in proximity to the options were identified, subject to availability of suitable data-sets. However, gathering of detailed information and the assessment of effects on LWSs is outside the scope of SEA. LWSs would be considered during the implementation phase of schemes at the project level. Obtaining information on all LWSs for the WRMP is not considered reasonable given the significant time and costs associated with acquiring the data. Screening of LWSs was undertaken for the Drought Plan as it was feasible to gather the required data set. Going forward, we acknowledge the importance of LWSs and are undertaking work to ensure that our plans and operations do not adversely affect LWSs. Natural England stated in their consultation</p> |

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| | | response "It is commendable local designated sites (LNRs/LWS/SiNCS) have been included in the SEA following advice to the company during the SEA scoping". |
| Environment Agency Improvement 5: Provide further information on resilience to other hazards | | |
| I 5.1 Resilience to non-drought hazards | Resilience testing to a number of hazards has been completed in consultation with asset managers (see Table 9.1 in the plan for example). Asset failure at the River Derwent weir has been considered and plans are in place (see section 3.12.1). However, it is not clear that the company has tested its plan against a range of non-drought related hazards (including flooding and freeze-thaw events), as outlined in Defra's guiding principles. | A new section on water supply resilience assessment and planning has been added to the revised plan (section 3.8). This includes details of testing against non-drought risks such as flooding and freeze-thaw, as outlined in the guiding principles document. |

Natural England consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>Habitats Regulations Assessment</p> <p>The continued investigation of an Appropriate assessment (AA) is welcome (ie for R9 option). However until the AA has concluded the Habitat regulations have not been reliably satisfied for this to be an environmentally acceptable option in the WRMP. More detail about current progress and conclusions of the AA is required.</p> | <p>The Stage 1 HRA screening has indicated that likely significant effects on the SAC could not be ruled out as a result of the implementation of the R9 scheme. HRA Guidance indicates that the Plan making authority (in this case Yorkshire Water) shall adopt, or otherwise give effect to the Plan, only after having ascertained that it will not adversely affect the integrity of a European site. As such, a Stage 2 HRA was required to determine whether the implementation of the R9 Scheme could impact on the conservation objectives or the qualifying features of the SAC.</p> <p>Yorkshire Water, Ricardo Energy & Environment and Natural England discussed and agreed the approach to, and initial findings of, this assessment in July 2018.</p> <p>The units of the SAC most likely to be affected by the scheme are located between 4.9km and 6.7km from the location of the scheme. Analysis of geological and borehole data indicates that the SACs are above the groundwater water table level and that the SACs are designated for non-water dependant features.</p> <p>The HRA report has been updated to include an appendix (appendix B) to provide information to inform the Appropriate Assessment. Available information indicates that the scheme will not, alone or in-combination with other plans or projects, have an impact on the conservation objectives or the qualifying features of the SAC. As such, the scheme will not have a significant adverse effect on the integrity of the site</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | <p>We are currently undertaking a detailed HIA and water features assessment to confirm potential impacts associated with this scheme. This scheme is not likely to be required before 2022, and any information to support the conclusions of the Appropriate Assessment, and reduce uncertainty, will therefore be available before the scheme is considered. It is also important to note that this scheme has been included to improve resilience only, therefore if a subsequent assessment demonstrated a likely significant effect, alternative options within the preferred plan would be implemented to meet demand.</p> |
| <p>Strategic Environmental Assessment</p> <p>The SEAs five year temporal scope does not comply with the regulations long term requirement</p> | <p>Section 4.3 in the Environmental Report has been updated to clarify that the temporal scope of the SEA is aligned with the 25-year duration of the WRMP.</p> |
| <p>Enhancing resilience</p> <p>The long term resilience of the plan could be improved (beyond options for AMP7) for both supplies and environmental sensitivities.</p> <p>The plan (dWRMP) could be much improved by giving greater consideration to opportunities in the natural environment to help secure resilient water supplies, such as integrated catchment solutions, alongside its traditional asset and infrastructure based options to increase water supply. The natural environment has a major role in the provision and regulation of water resources (both quality and quantity).</p> | <p>For PR19 we have developed a resilience framework to assess the maturity of our resilience in all parts of the business, including land management and water supply systems. The process and findings of this has been published in our report 'Water resilience in Yorkshire' alongside our PR19 business plan. Details of this resilience planning are included in section 3.8 of the revised plan. Section 3.8.9 gives specific details of our approach to resilient catchment management to protect Yorkshire's raw water and biodiversity.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Biodiversity</p> <p>The plan (dWRMP) has not considered its approach to net gain for biodiversity, its continued catchment programme is welcome but could do more to protect the natural capital of raw water sources and the water supply network from pollution whilst also enhancing the natural capital of other ecosystem functions.</p> | <p>Our strategy for biodiversity, which will be applied across all relevant aspects of our business, is detailed in section 3.9 of the revised plan.</p> <p>In this section we include our ambition for a net gain for biodiversity and ecological resilience, working with others to deliver positive outcomes for the environment.</p> <p>In section 1.6 of the revised plan we describe how we are embedding the concept of the Capitals (including natural capital) into our long-term business planning, to help us ensure the affordability and resilience of our services both now and in the future.</p> |
| <p>The ambition of the government’s 25 year plan is for a healthy more resilient environment, therefore it is important the dWRMP gives this more consideration and integrates the ambition with it’s primary objective to develop resilient water supplies. We do appreciate however the 25 year plan wasn’t publicly available until January 2018.</p> | <p>Following preparation of our draft WRMP19 the Government published A Green Future: Our 25 Year Plan to Improve the Environment in January 2018, which sets out their plans to improve the environment within a generation. The plan sets out how this will be achieved through a number of goals including reducing the damaging abstraction of water from rivers and groundwater and supporting Ofwat’s ambitions on leakage, with water companies expected to reduce leakage by at least an average of 15% by 2025. These ambitions are fundamental to our resilience strategy ‘Water Resilience in Yorkshire’ which will be published with our PR19 Business Plan. Relevant details of our resilience assessment and strategy for improvement are provided in the Resilience and Biodiversity sections in the revised plan (sections 3.8 and 3.9)</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Natural Capital and Ecosystem Services</p> <p>It is recommended the dWRMP could be much improved in its approach to enhance natural capital and improve ecosystem services. For example, protecting raw water quality is still the major role water companies can play and do more around this, creating a direct benefit to the WRMP and water supply because of reduced need for treatment/blending etc.</p> | <p>The Environment Agency's <i>Environmental Valuation in Water Resources Planning – Additional Information</i> (2016) recommends the use of a risk-based approach to assessment of environmental and social impacts of the plans. For environmental impacts, the Environment Agency encourages the use of the ecosystem services approach as a first step in assessing the water resource management plans (although it also presents alternative appraisal methodologies). For the draft WRMP19, we identified environmental impacts using the ecosystem services approach and were further informed by results of the Strategic Environmental Assessment.</p> |

Ofwat consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>Plan building blocks</p> <p>Yorkshire Water used methods appropriate to the scale and complexity of the problem it needs to address, and we welcome the consideration of non-drought resilience in the draft plan. However, we consider greater clarity is needed on the levels of service. Further specific comments:</p> | |
| <p>The company should provide further clarity regarding the levels of service stated in the final plan. Further considerations:</p> | |
| <p>More justification and supporting evidence is required to support the level of service with respect to level 4 restrictions, such as standpipes, which is stated as 1-in-500 year in the draft plan. We note the plan indicates some uncertainty in defining the return periods of historic drought events and we would like to understand how this impacts the stated levels of service.</p> | <p>In our revised plan section 3.5, we have provided further clarity on our levels of service, especially with respect to level 4 restrictions. We now refer to the <i>Handbook of Source Yield Methodologies</i> (UKWIR, 2014) which included our approach to calculating the frequency of level 4 restrictions.</p> |
| <p>Levels of service should also be reviewed with respect to the uncertainty regarding climate change detailed in section 4 below.</p> | <p>Each of our climate change scenarios have been used to model deployable output using our water resources simulation model. The deployable output modelled is the demand that can just be met whilst also meeting our levels of service. Our customers have indicated that they wish to maintain our current levels of service, so in most cases applying climate change scenarios results in a reduction in deployable output as demand is reduced to meet our levels of service.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>The draft plan includes references to threats that may impact asset resilience, including flooding and power outages. Specific assets where a risk of failure could result in outage of supply are also identified, alongside mitigation measures. We understand these risks will be further assessed during 2020-25 and we expect to see this reflected in future plans.</p> | <p>We have included an additional chapter (section 3.8) in our revised plan which describes our company approach to resilience and gives specific detail of resilience to non-drought hazards such as flooding and freeze-thaw. Further resilience studies on key assets in our region will be carried out in AMP7 and the results used to inform future WRMPs and business plans.</p> |
| <p>Customer participation</p> <p>There is limited evidence of customer participation in development of the draft plan. We understand further engagement is planned, however, we expected a higher level of engagement to support development of the draft plan. Reflecting this we expect the final plan to demonstrate that customers have been able to participate effectively in the planning process, and to see evidence of how this has shaped the final plan.</p> | <p>Further detail of customer consultation carried out following publication of our draft plan has been included in the customer engagement information provided in Appendix C.</p> |
| <p>Yorkshire Water has provided some evidence of customer participation in the draft plan principally through the use of data from the previous plan complemented by the views of the online community called 'Your Water'. The company intend to undertake further customer engagement and reflecting this we expect the final plan to demonstrate that customers have been able to participate effectively in the planning process and how this has shaped the plan.</p> | |
| <p>We welcome Yorkshire Water's use of an online community, 'Your Water', which appears to include a wide range of customers. However, in the final plan we expect to see evidence that customers beyond this online community have participated in the development of the plan.</p> | |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Customer preferences presented in the draft plan suggest customers have not been provided with potential cost impacts of the preferred options. For example, the company should provide evidence that customers have been consulted regarding potential bill impacts of the leakage reduction strategy adopted and as well as being presented with alternative options.</p> | |
| <p>It is unclear if customers have been consulted on levels of service for different restrictions or whether relative drought resilience levels have been compared with other companies to enable informed engagement. We expect customer preferences regarding levels of service, and the influence on decision making, to be clearly articulated within the final plan.</p> | <p>As part of our customer research into our proposed outcomes and performance commitments for PR19 we discussed Drought Risk and the company position against the percentage of population that would be impacted by a 1 in 200 year drought risk measure.</p> <p>When compared to other performance commitment measures, it came in the bottom five of importance, as customers are happy with our performance in this area and the level of service we plan to.</p> <p>For PR19 we have not consulted with customers on levels of service for other restrictions as in PR14 customers were supportive of our overall level of service - with customers unwilling to pay more for an enhanced level of service or prepared to accept a lower level of service for a reduced bill.</p> |
| <p>Linked to the point above, Yorkshire Water have stated it is currently undertaking a valuation process to understand customers' priorities. We expect to see the influence of this process, especially for options selected for the preferred plan, clearly articulated in the final plan.</p> | <p>Further detail of customer consultation carried out following publication of our draft plan has been included in the customer support section within Appendix C of the revised plan.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>There is no mention of Yorkshire Water's Customer Challenge Group within the draft plan. We expect to see detail of how the group has shaped the plan, including its role in assuring customer engagement activities, within the final plan.</p> | <p>The Yorkshire Forum for Water Customers Environment Sub-group was established to support the main Forum in challenging our activities on issues relating to the environment. This has included consideration of submissions to Ofwat, the Government, the Drinking Water Inspectorate (DWI), the Environment Agency and Natural England.</p> <p>The Environment Sub Group have discussed the WRMP19 over many meetings and have examined the guidance, the drivers, our approach, environmental impacts, the solutions, the technical papers, the assurance, the Board assurance and the public consultation. The Sub group involvement is continuing with regard to consultation representations, our statement of response and drafting of the revised plan. Further details have been included in section 10.4 of the revised plan.</p> |
| <p>Demand forecast</p> <p>Yorkshire Water's baseline average PCC of 123 l/h/d is the lowest of all companies and this position is maintained throughout the planning period. However, clarity is required on the forecast trends as both measured and unmeasured PCC are identical in both baseline and preferred plan in the planning tables.</p> | <p>This is correct. Our baseline demand forecast includes the impact on demand of forecast metering and planned water efficiency activity. In our preferred plan to maintain the future supply demand balance we are not proposing further customer metering or water efficiency activity above that in our baseline forecast position. Therefore, the PCC values presented in our baseline and final planning tables are the same. Water delivered to measured and unmeasured households is forecast to reduce in the final planning tables due to reducing supply pipe leakage, but this is not included in consumption or PCC estimates.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>The draft plan notes engagement with non-household will be undertaken as part of PR19 business planning. We expect the final plan to explain how this engagement has influenced the non-household demand forecast.</p> <p>Yorkshire Water has calculated the available supply, with reference to the relevant supply forecasting guidance, and has modified historical drought records to create a simulated drought. This simulated drought is then used to determine low frequency drought yields. However, greater clarity is required on the approach to incorporating climate change in the supply forecast and to demonstrate return periods have been determined appropriately for the drought scenario. In particular:</p> <p>Yorkshire Water have identified a high vulnerability to climate change due to a high degree of uncertainty in the scenarios. Greater clarity on the approach to climate change is required in the final plan to provide assurance this is robust.</p> | <p>In February 2018 we undertook qualitative research to understand the challenges faced by, and services required by, non-household retailers in the Yorkshire Water region. As part of this research retailers were asked about planned water efficiency activity and known areas of growth for inclusion in WRMP19 forecasts.</p> <p>The research found that only efficiency-specialist retailers had any plans for water efficiency, and these were general plans rather than targeted specifically at customers in the Yorkshire Water supply area. Current water efficiency resources are focussed in the South East and South West regions, where there is considered to be more demand.</p> <p>Retailers were unable to provide any detail of known efficiency or growth and were unable to forecast any short or long-term changes in demand.</p> <p>We have therefore not included any amendments to our non-household demand forecast as a result of this engagement.</p> <p>This detail has been included in our revised plan.</p> |
| <p>Supply forecast</p> <p>Yorkshire Water have identified a high vulnerability to climate change due to a high degree of uncertainty in the scenarios. Greater clarity on the approach to climate change is required in the final plan to provide assurance this is robust.</p> <p>Further considerations:</p> | |

| Consultee information or changes required | Yorkshire Water response |
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| <p>The variations in available supply across the climate scenarios could have a very significant impact upon the supply-demand balance and the company’s ability to maintain its levels of service. Yorkshire Water should clarify how this has influenced its uncertainty assessment.</p> | <p>Additional text on the variations of climate change impacts on supply and the uncertainty assessment has been added to Sections 7.1 and 7.2 of the revised plan.</p> |
| <p>A number of assumptions have been made in selecting the baseline scenario for the draft plan, including adopting an alternative scaling period to that set out in guidance. The company should provide further justification to support its approach in the final plan, for example through third party assurance.</p> | <p>The Environment Agency scaling equations are recommended in the WRMP guidance, but the guidance also acknowledges that this may not be suitable for all areas. We discussed our use of alternative scaling equations with our local Environment Agency and with our external auditor, and both agreed that a drop of 70MI/d by 2020/21 was unlikely.</p> |
| <p>The draft plan notes Yorkshire Water intends to continue investigation into this area in 2020-25. For clarity and increased confidence in the management of this risk, a summary of the proposed investigations and what benefit would be expected from them should be provided in the final plan.</p> | <p>We have provided this in our revised plan. We intend to use the UKWIR methodology developed in the 2017 UKWIR report <i>Climate Change and the WRMP</i>, and any additional guidance that is published after the release of UKCP18.</p> <p>Until the release of UKCP18, we are unable to provide details of proposed investigations.</p> |
| <p>Forecast uncertainty</p> <p>Yorkshire Water has described a number of risks and uncertainties associated with the resilience in the preferred plan, together with mitigations, which is an example of good practice. The headroom included in the final plan is slightly lower than industry average and is not a driver of the plan. As mentioned in section 4 further clarification regarding uncertainty relating to climate change is required.</p> | <p>Additional text on the uncertainty due to climate change in the headroom allowance has been added to Section 7.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Options</p> <p>Yorkshire Water has provided some evidence of engagement with third parties but no third party options have been identified as feasible:</p> <p>The company should consider what it can do to promote third party supply and demand-side options, and explain the outcome of such consideration in the final plan.</p> | <p>Our focus for PR19 has been to reduce leakage to secure our supply demand balance into the future.</p> <p>However, we recognise that the use of third party options and a water resource market could help us deliver resilience, cost efficiency and innovations.</p> <p>We are therefore currently developing a water bidding market and plan to stimulate this market through early engagement with potential participants via a new Markets Portal. The portal will be supported by our Trading and Procurement Code and Bid Assessment Framework.</p> |
| <p>We note some third party options were rejected due to concerns such as water quality while discussions with other large third parties did not result in the identification of any options for inclusion in the plan. Yorkshire Water should continue to actively engage with third parties and provide support to ensure viable options are not unnecessarily screened out.</p> | <p>The Yorkshire Water Market Portal will list all opportunities for the water management market, including water resources, demand management and leakage services. By 2020 the portal will allow us to share trade opportunities quicker the published Market Information requirements and stimulate potential third-party options for consideration in PR19 and beyond.</p> |
| <p>Yorkshire Water has held discussions with, and provided information on, trades with neighbouring water companies. However, no potential trades to or from Yorkshire Water feature in the preferred plan or any other company’s plan. For the final plan the company should further consider if trading could have the potential to reduce costs, reduce environmental impact and improve resilience.</p> | <p>Further details of our approach to third party options and development of a water resources market is provided in section 9.1.6 of the revised plan.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>We welcome the proposal to reduce leakage by 39% between 2020 and 2025. This demonstrates a very high level of ambition. After 2025, it proposes a reduced rate to achieve an overall reduction in leakage of 48% by 2045. In its final plan Yorkshire Water should provide greater clarity it has adopted an appropriate profiling of the leakage reduction in terms of deliverability, customer preference and affordability.</p> | <p>To achieve the 40% leakage reduction, we have developed a costed plan, based on a combination of established and emerging leakage reduction techniques and strategies. We have commenced the plan and are already employing three times our normal field resource to locate and repair leaks. The initial reduction of 62.5MI/d by 2019/20 is being funded from efficiency savings made in the current AMP6. The investment required to reduce leakage by a further 60MI/d in AMP7 is included in our business plan for PR19.</p> <p>The overarching aim of our PR19 business plan is to ensure affordability for our customers and ensure bills are maintained at as low a level as possible while maintaining and enhancing the resilience of our water and waste water services.</p> <p>To maximise the cost benefit of this leakage reduction we plan to target activity in areas where water is most expensive to treat and distribute.</p> |
| <p>The level of metering penetration rises from a forecast 57% in 2020 to 64% in 2025 as a result of maintaining current optant strategies. There are feasible metering options that are not selected but have a lower cost than some of the relatively high cost leakage options. The company should provide further justification for the preferred plan option selection in this context.</p> | <p>Following publication of our draft WRMP19 we have continued to develop our approach to encouraging customers to opt to a metered supply. We are forecasting a decline in meter optants throughout the planning period as the number of unmeasured households decreases and those customers segments most likely to opt to a metered supply have already done so.</p> <p>However, customers are increasingly asking if we can offer a similar arrangement to the energy sector, where suppliers are obliged to ensure customers are on the best tariff, and this is an opportunity to encourage metering. We are reviewing accounts of customers who could save money from having a water meter</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | <p>installed. Where we estimate the customer would benefit financially we will offer a 2-year trial of a meter. During the trial period, we will assess whether the customers have saved money. If they haven't, we will switch them back to the unmetered rate.</p> <p>As a pilot, we have identified 100,000 customers who are currently in a property with a high rateable value and a small number of occupants. Therefore, their bills are likely to be higher than they would be if they were billed according to the amount of water they consume. If the pilot is successful, we will review the accounts of approximately 650,000 unmetered customers to identify those who might be better off on a metered supply.</p> <p>While this initiative will increase the number of metered customers and ensure we meet our forecast meter penetration, it may not drive a significant demand reduction as the reduced bill value from moving from a high rateable value bill to a lower metered bill may not result in a financial incentive to reduce water use.</p> <p>Therefore, we consider the option of increasing metering will not deliver as reliable demand reduction as leakage management options.</p> |
| <p>The company mentions potential pilot schemes for 2020-25 to identify the viability of demand management options in areas such as partnership working and greywater/rainwater reuse. In the final plan it would be helpful to clarify whether it intends to undertake these pilots and provide further detail on their scope.</p> | <p>We still intend to undertake the pilot schemes referred to in the dWRMP. However, the schemes are dependent on housing developers agreeing to installing greywater/rainwater infrastructure into new homes and therefore delivery and scope are uncertain. We have actively discussed this with a number of developers and their agents and there has been some interest in continuing the discussions as the planning process becomes more mature. We are also looking at different delivery models e.g. New Appointment</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | Variation Model, where a third party comes in and delivers the service on our behalf. |
| <p>Decision making</p> <p>Decision making was based on an economics of balancing supply and demand (EBSD) approach which is appropriate for the problem characterisation. However, as the preferred plan is notably different from the least-cost scenario, further justification is required for its selection. Further specific comments:</p> | |
| <p>In the final plan the company should clearly present costs of each planning scenario considered with specific focus upon the comparison between the least cost and preferred plan.</p> | <p>We have added a table presenting the costs and benefits of each planning scenario in the revised plan (Table 10.3 within section 10.8 Scenario comparison).</p> |
| <p>The preferred plan appears to be selected through constraining or pre-selection of certain options based on expert judgement using a number of factors including resilience, customer preferences and environmental impact. However, the influence and assessment of these factors does not appear to be clearly defined, reducing the transparency of the process. This stage of the decision making process, and the influence of the factors on the selection of the preferred planning solution, should be further explained.</p> | <p>We have added detail of our decision making process into section 10.1.1 of the revised plan. This section describes the consideration we have given to the PR19 methodology, government and customer requirements when determining our preferred plan.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Further explanation should be provided to explain how resilience benefits were incorporated in the decision making process. We note this led to the selection of the two groundwater supply options in the preferred plan which are not required for the supply-demand balance.</p> | <p>The two boreholes, selected to improve resilience as part of the PR19 Business plan, were selected outside of the WRMP supply-demand balance calculation. Further information has been added in Section 10.1.1 of the revised plan.</p> |
| <p>Greater clarity is required with respect to decision making and we expect to see more transparency on how the final programme was selected, to demonstrate it represents an appropriate package of options. This includes the adoption of a 40% leakage reduction target after the first version of the draft plan was submitted. The company should explain how and by whom the preferred programme was decided.</p> <p>The company should provide clarity regarding the decision making process for the selected profile for leakage reduction in the preferred plan. We note this was subject to a late change between the plan first submitted on 1 December to regulators and the published plan. It also appears that the level chosen leads to the selection of leakage reduction options that are relatively expensive when compared with other demand management and supply-side options.</p> | <p>Further detail has been provided in section 10.1.1 of our revised plan - Our decision-making process.</p> |

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| <p>The draft plan was subject to assurance including challenge from independent auditors and evidence is provided of engagement with the Board for approval of the draft plan. Further clarity should be provided on the Board's role in the decision making process, including the late adjustment to the ambition around leakage reduction in the published draft plan.</p> | |
| <p>National and regional considerations</p> <p>The draft plan takes into account outcomes from the Water UK national project and uses them to support its approach to resilience and highlight the uncertainty associated with climate change. The company is also part of the recently formed 'Water Resources North' regional group which aims to further promote collaborative working on water resources in the north of England. We expect the group to work to identify opportunities to support both regional and national water resources planning.</p> | <p>The agreed primary objectives of the group set out in the terms of reference fully align with this expectation. These are:</p> <ol style="list-style-type: none"> 1. Contribute to securing the long-term resilience of water supplies and the water environment in the north, across all stakeholders, and 2. Facilitate a co-ordinated approach across northern water companies to cross-boundary trading that may contribute to enhancing national water resource resilience. |

Historic England consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>Overall, we would concur with the assessment of the likely significant effects which the various Options which are put forward in the Draft Plan might have upon the historic environment. We would also endorse the mitigation measures which have been put forward for Cultural Heritage.</p> <p>We should like to stress that this opinion is based on the information provided by with the email dated 27 March 2018. To avoid any doubt, this does not affect our obligation to provide further advice and, potentially, object to specific proposals which may subsequently arise (either as a result of this consultation or in later versions of the Plan) where we consider that, despite the SA/SEA, these would have an adverse effect upon the historic environment.</p> | <p>It should be noted that the SEA is a high-level assessment aimed at highlighting potential environmental concerns, associated with plans and programmes at a strategic level.</p> <p>At a later stage, during the implementation of WRMP options, any major schemes would be subject to a more detailed Environmental Impact Assessment at a project level prior to implementation. It would be at this stage that we would consult further with the Conservation Sections and archaeological staff of the various planning authorities, as part of a much wider consultation process.</p> |
| <p>Thank you for consulting Historic England about Yorkshire Water's Draft Water Resources Management Plan. At this stage, we have no comments to make about its contents.</p> | |

Canal & River Trust consultation response

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| <p>We believe the Trust can play a significant role supporting the water sector as it strives for resilience and affordability in delivering public water supply. Our waterway infrastructure already exists and with investment from the sector could unlock resilient and cost-effective water transfer schemes across England and Wales.</p> <p>The Trust welcome the Yorkshire Water initiative for the development of the Water Resources North group and believe our existing infrastructure can significantly contribute to enhanced national water resilience. To date, the Trust have not been involved in the Water Resources North group but believe they would benefit from our inclusion.</p> | <p>To date we have held three meetings of Water Resources North. The primary aim of the initial meetings was to present draft WRMP information, including supply demand balance, significant issues and planned investment to meet any forecast deficit. This included potential options within draft plans to support neighbouring water companies through water trading.</p> <p>These meetings were attended by five water companies and our two environmental regulators the Environment Agency and Natural England.</p> <p>Other relevant stakeholders (abstractors and regulators) including agriculture, Canal & River Trust, the power sector, IDBs, Ofwat and CCWater will be included in future meetings as appropriate.</p> |
| <p>The Trust recognise that Yorkshire Water are predicting to have a supply demand deficit starting in 2034/35 and are planning to address this by implementing an ambitious leakage management programme and developing two groundwater supply options over the planning period.</p> <p>Early in development of their dWRMP19, Yorkshire Water had discussions with the Trust around the evaluation of three potential canal related schemes. Unfortunately, none of these options were taken further than the unconstrained options phase, however we will continue our dialogue with Yorkshire Water to help identify and develop cost effective and resilient schemes.</p> | <p>The three schemes were not taken further for a number of reasons: location of the water in relation to treatment facilities, licence expiry timescale and United Utilities confirming they did not require a proposed canal related export.</p> <p>The WRMP is revised every five years and we will consult the Canal & River Trust on potential trades during the pre-consultation stage of each plan.</p> |

Barnsley Metropolitan Borough Council consultation response

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| <p>Barnsley MBC is strongly in support of Yorkshire Water’s (YW) commitments set out in their Water Resources Management Plan. However I would request clarification on a number of points set out below:</p> | |
| <p>Barnsley MBC’s Local Plan has been through a Consultation Process and is about to be published, It considers the future use of all land within the Barnsley borough, including Barnsley Town Centre, and establishes policies and proposals up to the year 2033. The Local Plan includes policies to deliver housing, ■ retail, leisure and commercial development, ■ education, health, police and community facilities. This includes large areas of the borough with potential to develop Housing and commercial properties. Has this been taken into account when producing future usage projections?</p> | <p>In preparation of our draft WRMP19 we collated Local Plan growth evidence from all relevant local authorities, as available at the time (August 2016). For Barnsley MBC the Local Plan status at the time was ‘In preparation’, for the plan period 2014-2033. The planned housing target from this Local Plan incorporated into our WRMP household property and population forecast was 20,900 properties.</p> <p>Forecast commercial properties from Local Plans is not used in our development of business demand forecasts. Instead, this is developed from modelling of economic factors that are forecast to influence growth and demand for water.</p> |
| <p>Given Severn Trent Water’s commitment to reduce supply volume to the YW area by 2020 why is no study or works planning being carried out for solutions to make up this deficit and is this potential loss included in the supply forecast.</p> | <p>Following publication of our draft WRMP19, Severn Trent Water have confirmed they no longer require a reduction in our import volume in 2030. We have committed to working together to identify the impacts of any changes in the operation of the Derwent Valley reservoirs.</p> |
| <p>A new set of climate projection data for the UK (UKCP18) will be published in 2018. Will the Plan be updated following the publication of this document, if not what assumptions have been made in the document to take this into account.</p> | <p>When the UKCP18 scenarios are released we will assess their impact on our potential water resources using the methodologies of the UK Water Industry Research project: Climate Change Modelling and the WRMP, 2018. We will not revise our WRMP based on these assessments, unless we believe they will have a significant impact on our plan. Initial indications are that the range</p> |

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| | <p>of UKCP18 projections will be similar to that for UKCP09. We will be guided by the Environment Agency on the appropriate time to consider the use of the UKCP18 projections.</p> |
| <p>There is a stated leakage reduction target of 40% which equates to 175MI/day by 2024. The Plan states that the greatest threat to water supply is climate change which has a predicted loss of 100 MI/day by 2044/45. Clearly leakage is a much greater issue at least in the shorter term should there be greater investment in this?</p> | <p>Our proposed leakage target will reduce leakage from the current volume of 297MI/d to 175MI/d by 2025, a reduction of 122 MI/d over the next 7 years.</p> <p>We have identified, costed and quantified a series of feasible options to deliver this reduction, which we believe is ambitious, yet deliverable in the planned timescale. This target will reduce leakage significantly below the level where the cost of leakage reduction outweighs the benefits (the economic level of leakage). However, we believe it is the right thing to do for a number of reasons: to reduce our impact on the environment, to enhance our resilience to events such as drought, and to encourage customers to value water and reduce their own water usage.</p> <p>This level of leakage reduction will require significant investment and involve the use of new technologies and innovations in leakage management to achieve it. We therefore consider that within this short timescale our ambition and investment is proportionate to managing future risks to supply and demand such as climate change.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Given that leakage targets in AMP 6 were roughly static for the years it covered (Table 5.1) and leakage volume figures supplied in Table 5.2 for 15/16 and 16/17 what confidence is there that the 40% is achievable and is the Capital Funding in place to carry out these works.</p> | <p>In AMP6 our leakage targets were determined primarily through assessment of the economic level of leakage, calculating the level where the cost of leakage reduction outweighs the benefits. For AMP7 and beyond, we are responding the requirement from both our customers and regulators to drive more ambitious leakage reduction in the future, and to consider leakage not just in terms of economics. This means more fully considering the positive impact of leakage reduction on the environment, and the potential benefits to water supply resilience and opportunities for cross-sector water trading that reducing the volume of water lost through leakage could allow.</p> <p>To achieve the 40% leakage reduction, we have developed a costed plan, based on a combination of established and emerging leakage reduction techniques and strategies. Our Board has approved these plans and the associated funding.</p> <p>We have commenced the plan and are already employing three times our normal field resource to locate and repair leaks. The initial reduction of 62.5MI/d by 2019/20 is being funded from efficiency savings made in the current AMP6. The investment required to reduce leakage by a further 60MI/d in AMP7 is included in our business plan for PR19. To maximise the cost benefit of this leakage reduction we plan to target activity in areas where water is most expensive to treat and distribute.</p> <p>We have set annual targets to achieve the leakage reduction of 40% by 2025. As leakage is extremely weather dependant, increasing significantly in prolonged cold conditions, we may not achieve the annual target every year if faced with an extreme weather event. However, we are confident in the 7 years to 2025</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | leakage will be reduced by the required trajectory to achieve the planned 40% reduction. |

Calderdale Council consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>The proposal to restore the hydrology of peatland catchments in Yorkshire is noted. Although YW’s intervention is primarily to avoid water discolouration, CMBC advocate this approach as a means of also supporting natural flood risk management. However, it is noted that the WRMP makes no reference in the WRMP to the relationship between water resource management and flood risk management. This we believe is a serious omission and oversight.</p> | <p>We acknowledge that that restoration of blanket bog environments has multiple benefits, including water quality, water retention and enhanced biodiversity.</p> <p>We have included reference to these multiple benefits in our revised plan (section 3.10).</p> |
| <p>You will be aware of the catastrophic flood events that have occurred in the Calder valley in the past, most evident on Boxing Day 2015 when over 2,000 homes were badly affected and over 1,000 businesses were also hit. Bridges collapsed disrupting communication and several electricity sub-stations failed causing power cuts across the valley. Following this, Flood Risk Management Authorities have worked together in partnership to introduce a range of flood mitigation measures to reduce the impact of future events. One of these has been to investigate the potential for providing flood water capacity in the reservoirs in the upper catchment.</p> <p>YW have supported a trial that has taken place during winter 2017/18 in which the level of water in the impounding reservoirs in the Upper Calder valley were drawn-down to provide capacity for flood attenuation. Modelling prior to the trial had indicated that a reduction of 10% of water volume in the reservoirs above Hebden Bridge would provide a significant increase in the level of flood risk protection to the town before and after construction of the Hebden Bridge Flood Alleviation Scheme. In conjunction, YW also carried out analysis to understand the effect on water resource and to consider mitigation measures to off-set this reduction. This study demonstrated that the impact on water resource across the region would be small and could be overcome.</p> | <p>Calderdale Council will be aware that we are continuing to progress actions related to reservoirs and flood risk and that these are reported through the Calderdale Flood Action Plan and Calderdale Flood Partnership Board. We believe that it is appropriate that actions related to flood risk continue to be reported through this well-established route, and not through the WRMP, as the WRMP is focussed on water resources management.</p> <p>We remain committed to continuing to explore this issue and we welcome the Council’s recognition that the desire for use of reservoirs for flood risk must be balanced with the need to ensure secure water supplies to the region.</p> <p>We have included reference to this work in our revised plan (section 3.1).</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>Given all of the above through this consultation process CMBC request that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The relationship between water resource management and flood risk management is explicitly referenced in the Plan with a commitment to balancing the two agendas <input type="checkbox"/> YW make specific reference in their WRMP to reaching an agreement in the Upper Calder Valley to protect settlements from catastrophic flooding <input type="checkbox"/> YW commit to further develop the modelling already undertaken to assess the impact of these measures on water supply in the region. This, it is anticipated, will confirm that the impact on water resource can be managed within the WRMP. | |

Hull City Council consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>The Plan’s assessment of drought and water availability has been based on the UKCIP09 scenarios and therefore clarification is sought over when, during AMP7, Yorkshire Water intends to complete an assessment and update the Plan following the updated scenarios in UKCIP18 due for publication in the autumn. This is to ensure that the projects and subsequent investment stemming from the Plan take account of the latest available evidence. Clarification is also sought on whether there will be further consultation on revisions to the Plan stemming from the new scenario assessment.</p> | <p>When the UKCP18 scenarios are released we will assess their impact on our potential water resources using the methodologies of the UK Water Industry Research project: <i>Climate Change Modelling and the WRMP</i>, 2018. We will not revise our WRMP based on these assessments, unless we believe they will have a significant impact on our plan. Initial indications are that the range of UKCP18 projections will be similar to that for UKCP09. We will be guided by the Environment Agency on the appropriate time to consider the use of the UKCP18 projections.</p> |
| <p>On Page 5 the Plan states that the Environment Agency has changed the scenarios planning to the 2080’s and therefore the WRMP19 is based on this. Therefore clarification is sought on the later statement that Severn Trent have only planned for the 2030’s and therefore what impact a 2080 assessment by Seven Trent will have on the water transfer agreement detailed on Page 78 and how Yorkshire Water will approach this issue with Severn Trent. Further, what the view of DEFRA and OFWAT are to the apparent 50 year project in gap by Severn Trent and its impact on other water companies to adequately plan.</p> | <p>We have discussed the issues raised regarding Severn Trent Water using the 2030s and Yorkshire Water using the 2080s climate change projections. Severn Trent Water have modelled the effect of climate change on their supplies using 2030s climate projections, but they have carried out some modelling using 2080s climate change projections and used these for sensitivity analyses. The 2080s results fall within the range of the 2030s uncertainty.</p> <p>We have clarified in our revised plan that Severn Trent Water do plan to beyond the 2030s but have used 2030s climate change factors to model the effects of climate change on deployable output.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>On Page 6 and in detail later in the document it is stated that for the WRMP19 Yorkshire Water are not using the Environment Agency scaling equations and this has been discussed with the Agency. However, there is no commentary on what the view of the Agency is on the approach Yorkshire Water have taken and whether the Agency agree that the scenario generated by the Agency equations is not likely.</p> | <p>The Environment Agency scaling equations are recommended in the WRMP guidance, but in this document it is acknowledged that this may not be suitable for all areas. We discussed our use of alternative scaling equations with our local Environment Agency and our external auditor, and both agreed that a drop of 70MI/d by 2020/21 was unlikely.</p> <p>Additional text on the variations of climate change impacts on supply and the uncertainty assessment has been added to Sections 7.1 and 7.2 of the revised plan.</p> |
| <p>Page 72 Table 3.10 shows the deployable loss for Grid SWZ over the period to 2044/45; it is not clear if this takes account of the Severn Trent reduction from 2030?</p> | <p>Our deployable output does not include our import from Severn Trent Water (deployable output is supply provided by our sources only), but this import is included in our planning tables when we consider water available for use. We have not included the Severn Trent Water reduction from 2030 detailed in their draft WRMP19. We have met with Severn Trent Water, and they are no longer proposing a reduction in the Yorkshire Water import. We have committed to work together to investigate options for varying the agreement in the wider context of the Water Resources North Group. This joint work will involve water resources modelling of the Derwent Valley system and developing options for the Derwent Valley and wider Yorkshire Water and Severn Trent Water systems.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>On Page 78 of the Plan it discusses the transfer of water from Severn Trent under the existing WRMP14 and the future WRMP19 and the expected reduction in the volume of this transfer from 2030. The Plan goes on to state that there is not funding available in the AMP7 to undertake an assessment of the impact of this and how it might be mitigated by other water supplies. We feel the Plan should state when this will take place and how it will be funded.</p> | <p>Severn Trent Water are no longer proposing a reduction in the Yorkshire Water import therefore this investigation is no longer required. We will continue to work with Severn Trent Water to understand potential optimisation of the Derwent Valley reservoirs.</p> |
| <p>There appears to be no mention of additional storage or the potential for distributed water storage solutions for farm scale irrigation.</p> | <p>We will investigate the potential for shared water storage solutions in AMP7 as the water resource market and use of third party options develops.</p> |
| <p>Within the demand forecast projections it is not clear if the “new Household demand” is by 2040 as well?</p> | <p>Our forecast of household properties includes housing growth evidence from relevant local authority Local Plans. The Local Plan planning period varies for each local authority, with the longest planning periods extending as far as 2035. To provide a forecast of housing growth for our full planning period to 2045, the Office for National Statistics (ONS) trend-based estimate of annual housing growth has been used beyond each local authority’s plan period.</p> <p>This housing growth forecast to 2045 has been built into our modelled household demand forecast.</p> |
| <p>There is no detail in the Plan on the current leakage performance and therefore it is not possible to assess if the Plan proposals are likely or of a sufficient scale.</p> | <p>Details of reported leakage for the years 2015/16 and 2016/17 are provided in table 5.2 in section 5.2 Estimating total leakage – under both the current methodology and the ‘consistent’ reporting methodology that will be in place from AMP7 (2020/21 onwards).</p> <p>This section has been updated to include reported leakage in</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | 2017/18. |
| <p>Finally, the last point has been further brought into focus by the publication of the Environment Agency “State of the Environment: Water Resources” Report on the 23rd May. While this has been published at the end of the consultation period it would be beneficial if Yorkshire Water could identify, in response to the consultation questions, how it is/will respond to the issues raised in the Report.</p> | <p>The Environment Agency “State of the Environment: Water Resources” Report has been reviewed and added to Table C1 in Appendix C of the SEA.</p> |

Customer 1 consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>Yorkshire Water are not prioritising environment driven reductions in the early part of the plan. The impact of human activity on invertebrates has recently been highlighted with reports from, amongst other places, France on the massive reduction in insect life. This is mirrored in Yorkshire where large parts of the rivers Aire and Wharfe are designated as "failing" by the Environment Agency. River environments are a major contributor to invertebrate life. It is simply unacceptable to postpone reversing this decline and this should be an important part of Yorkshire Water's plans. Their business unfortunately has a serious and detrimental impact on our wildlife. To this end they should be urgently reducing abstraction from rivers and placing invertebrate life at the centre of their plans. Insects in rivers are the base of the food chain and birds and fish depend on a healthy stock.</p> | <p>Our abstractions on the River Wharfe are regulated by river flows. At low flows, we are required to support our abstractions by releasing water from Grimwith reservoir. In the lowest river flow band, we release 22.6MI/d more water into the river than we abstract.</p> <p>We do not abstract from the River Aire.</p> <p>We are informed of any confirmed flow related ecological (macroinvertebrate or fish) impacts related to our assets by the Environment Agency via the Water Industry National Environment Plan (WINEP). Through this we monitor the ecology of our rivers in relation to specific projects and plans.</p> <p>The Water Framework Directive is the key legislation for protecting and improving the water environment. It seeks to achieve "Good Ecological Status" wherever possible in watercourses, subject to a set of feasibility and cost tests. The Environment Agency assess ecological status for a wide range of parameters including fish, invertebrate, microphyte, morphology and water quality elements. The cause of less than good status is investigated and assigned to a sector by the Agency.</p> <p>The Environment Agency and Natural England published the obligations and expectations for the water industry for the price review PR19 (2020-2025) in detail in the <i>Water Industry Strategic Environmental Requirements (WISER)</i> document. It describes the environmental, resilience and flood risk obligations for companies</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | <p>to take into account when developing business plans.</p> <p>We have worked with the Environment Agency and Natural England to apply and interpret the strategic environmental requirements to Yorkshire Water. The final WINEP3 agreed with Environment Agency and Natural England lists the extensive obligations to meet the regulatory requirements and ambition as set out in the WISER document for all water bodies that we impact upon, including the Aire and the Wharfe.</p> <p>Our PR19 programme is our most extensive and ambitious in terms of its breadth of scope and scale of ambition. The range of solutions vary from conventional engineering approaches, to our largest ever programme of catchment interventions to action on biodiversity and invasive species.</p> |
| <p>They claim that they are setting "challenging" targets to deal with leakage. I have little confidence that they will achieve any such targets and firmly believe that they will be putting making profit before looking after Yorkshire's interests</p> | <p>In setting future leakage targets we have listened to our customers, Government and regulators about the need to be more ambitious in leakage management and to improve our comparative performance.</p> <p>The initial reduction of 62.5MI/d by 2019/20 is being funded from efficiency savings made in the current AMP6. The investment required to reduce leakage by a further 60MI/d in AMP7 is included in our business plan for PR19. To maximise the cost benefit of this leakage reduction we plan to target activity in areas where water is most expensive to treat and distribute.</p> <p>To achieve the 40% leakage reduction, we have developed a costed plan, based on a combination of established and emerging leakage reduction techniques and strategies. We have</p> |

| Consultee information or changes required | Yorkshire Water response |
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| | <p>commenced the plan and are already employing three times our normal field resource to locate and repair leaks so give us confidence that we will achieve the targets.</p> |

Customer 2 consultation response

| Consultee information or changes required | Yorkshire Water response |
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| <p>I am writing to comment on YW’s draft plan. I cannot see how the preferred solution “Targeting a reduction in leakage of 40% (120Ml/d), to reduce leakage to 175Ml/d by 2024/25” is justified either by need, or by economic argument or by customer support. I believe that driving leakage down in the long term is the ideal way to meet increased demand and loss of yield from climate change. However, I do not believe that an ambitious leakage programme, which will increase customer bills, carry unimaginable risks and unnecessarily increase available headroom is justified.</p> | <p>For PR19 Ofwat expect water companies to set stretching leakage performance commitments levels in relation to a number of challenges: achieve forecast upper quartile performance (in relation to leakage per property, per day and leakage per kilometre of main per day; achieve at least a 15% reduction in leakage; achieve the largest actual percentage reduction achieved by the company since PR14. This expectation from Ofwat, combined with customer feedback that current leakage levels are unacceptable has been central to determining our leakage ambition for PR19 which goes beyond the previous requirements for leakage reduction to be driven by need (supply demand balance) or economic argument (estimation of SELL).</p> |
| <p>YW’s team has spent a significant amount of time creating the supply and demand forecasts. The plan shows that no further action needs to be taken until 2034/35. It also shows that customers were asked about their views on current and potential future levels of leakage control. Table 10.2 shows 20% supported a “Maximum possible reduction of leakage saving 50 Ml/d”. Note that this is the maximum value in the survey and presumable a 122M/d, 40% reduction was not considered feasible. (50Ml/d is a 16% reduction). 32% (about a third) were happy with current levels of leakage and did not want to pay any more to reduce leakage.</p> | <p>Since publication of the draft WRMP19 for consultation we have carried out further research to understand customers priorities. Details of this are provided in Appendix C of the revised plan.</p> <p>50Ml/d was considered the maximum possible leakage reduction achievable through the convention methods of ‘find and fix’. The 122Ml/d reduction is only possible using additional new and innovative techniques such as satellite and drones for leak location, permanent acoustic logging, thermal logging, network optimisation, smart networks solutions and addressing customer’s leakage and losses.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>The current leakage target for 2019/20 is 287.1MI/d (Section 9.5). The Sustainable Economic Level of Leakage (Section 5.5) is 297.44MI/d based on 2015/16 reported figures and/or 280.32 MI/d based on AMP7 data improvements. Therefore, the 2019/20 target sits somewhere between to two estimates depending on your confidence in the data. Neither of these values of SELL are significant however, when it comes to selection of the preferred option which is much lower.</p> | <p>We have calculated SELL for this WRMP, as historically this has been used to set leakage targets and performance commitment levels and it is a useful metric to understand. However, in their methodology for the PR19 price review, Ofwat have expressed concerned that this approach has not driven sufficient efficiency improvements or innovation in leakage reduction in recent years and could allow leakage levels to increase. For PR19 Ofwat expect water companies to set stretching leakage performance commitments levels in relation to a number of challenges: achieve forecast upper quartile performance (in relation to leakage per property, per day and leakage per kilometre of main per day; achieve at least a 15% reduction in leakage; achieve the largest actual percentage reduction achieved by the company since PR14. This expectation from Ofwat, combined with customer feedback that current leakage levels are unacceptable has been central to determining our leakage ambition for PR19.</p> |
| <p>Section 9.4 shows the how customers rank various solutions, assuming they were to be implemented. This shows a significant support for leakage reduction 68%, supply pipe leakage reduction 36% Figure 9.6). However it is unclear if the customers knew that none of these solutions would be required and this was process was more about relative preferences.</p> | <p>This was research carried out to understand customers relative preferences for potential options, to inform our future decision making should investment be required.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>In Section 9.7.4 the draft plan illogical leap forward with a leakage reduction plan that proposes a solution to drive leakage down by 40% to 175MI/d by 2025 with further reductions to 2045.</p> | <p>For PR19 Ofwat expect water companies to set stretching leakage performance commitments levels in relation to a number of challenges: achieve forecast upper quartile performance (in relation to leakage per property, per day and leakage per kilometre of main per day; achieve at least a 15% reduction in leakage; achieve the largest actual percentage reduction achieved by the company since PR14. This expectation from Ofwat, combined with customer feedback that current leakage levels are unacceptable has been central to determining our leakage ambition for PR19.</p> |
| <p>Whilst all the benefits stated in Section 10.2 are true, they go far beyond the specific requirements of the water resources management plan. That is, to have a publicly available plan that demonstrates the company can maintain a water supply and levels of service, taking climate change and uncertainty into account in a sustainable and affordable way.</p> | <p>In presenting a 40% reduction in leakage in WRMP19 we are reflecting a significant change in leakage reduction ambition driven by regulatory and customer requirements for PR19 business planning.</p> |
| <p>The key issues are that the baseline scenario demonstrates that available headroom is maintained until 2034/35 and no further action is required. (Other than for Regulators to agree a leakage target which meets the requirement of SELL or the balance of supply and demand)</p> | <p>Our plan does reduce leakage significantly below the level where the cost of leakage reduction outweighs the benefits (the economic level of leakage). However, we believe it is the right thing to do for a number of reasons: to reduce our impact on the environment, to enhance our resilience to events such as drought, and to encourage customers to value water and reduce their own water usage. We are also responding to a growing challenge from Government, our regulators are our customers to reduce the unacceptable volume of water lost through leakage.</p> |

| Consultee information or changes required | Yorkshire Water response |
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| <p>The 40% (122MI/d) reduction is not justified by customer willingness to pay surveys (20% supported a 50MI/d maximum reduction, 80% didn't). The 68% support is only a relative preference between different plan solutions.</p> | <p>Since publication of the draft WRMP19 for consultation we have carried out further research to understand customers priorities. Details of this are provided in Appendix C of the revised plan.</p> |
| <p>Finally, the speed and scale of the proposed leakage reduction until 2024/25 is so immense, I do not believe it is credible and that it can be achieved with the certainty that is required in such an ambitious plan.</p> | <p>To achieve the 40% leakage reduction, we have developed a costed plan, based on a combination of established and emerging leakage reduction techniques and strategies. Our Board has approved these plans and the associated funding.</p> <p>We have commenced the plan and are already employing three times our normal field resource to locate and repair leaks. The initial reduction of 62.5MI/d by 2019/20 is being funded from efficiency savings made in the current AMP6. The investment required to reduce leakage by a further 60MI/d in AMP7 is included in our business plan for PR19. To maximise the cost benefit of this leakage reduction we plan to target activity in areas where water is most expensive to treat and distribute.</p> |

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