

Draft Water Resources Management Plan 2024 Statement of response to public consultation

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Non-Technical Summary

Introduction

This document is Bristol Water's Statement of Response (SoR) to the public consultation on the draft Water Resources Management Plan (WRMP) 2024 (dWRMP24). It summarises the comments we received on the draft plan, our responses to them, and how we have modified or plan to modify the draft plan to develop our revised draft WRMP24 (rdWRMP24).

All water companies in England and Wales must produce a WRMP and update it every five years. We last published a WRMP in June 2019. We reviewed and updated the plan in 2022 and issued our dWRMP24 for public consultation in November 2022.

The WRMP24 sets out how, with the active participation of our customers, we propose to ensure that there is a sufficient supply of water to meet future demand from all our customers over the 25-year planning period from 2025 to 2050. The WRMP is closely linked to our Business Plan and our Drought Plan.

Consultation

It is a statutory requirement that we consult on our dWRMP24. The consultation provides customers, regulators and stakeholders with an opportunity to consider our proposals to manage water resources and demand in our supply area, and how this may affect them. They then provide us with any feedback they would like us to take into account.

Comprehensive consultations were carried out with our customers as part of the development of our draft plan, alongside the structured pre-consultation process we followed with our regulators and other key stakeholders. Our customer engagement involved several innovative approaches, such as our online customer panel, customer preference testing using games at festivals, and full-day deliberative workshops. The engagement enabled us to create a best value programme of measures to deliver reliable and resilient water supplies for our customers as set out in our dWRMP24.

We published our dWRMP24 and Non-Technical Summary (along with Appendices) for a twelve-week public consultation period that ran from 28th November 2022 until 17th February 2023. As part of this public consultation process, we wrote to over a hundred consultees, implemented a dedicated online feedback questionnaire, and promoted both the questionnaire and the consultation in general on our website, social media accounts, company intranet, and through communications with our Non-Household Retail Customers.

We value all the feedback we have received on our draft plan and have reviewed all of the comments. We have used them to develop our rdWRMP24. Following the consultation period, we had meetings with the key regulator organisations: Ofwat, the Environment Agency and Natural England, to ensure that we fully understood their comments and suggestions for improvements.



Revisions to our draft WRMP24

Since we published our dWRMP24 there have been changes to national policy and relevant guidance, changes to our company structure, as well as continued programmes of work (which had not yet been finalised by draft publication) to consider. These changes have required us to make revisions to our dWRMP24, and include:

- As part of the Accelerated Investment Programme, Ofwat approved our proposals to deliver two schemes to replace 1,000 customer supply pipes and 500 internal and 500 external lead pipes, to reduce leakage.
- In 2022, Bristol Water became part of the Pennon Group. The group comprises South West Water, Bournemouth Water and Pennon Water Services, which together serve 3.1 million customers across the southwest of England. We are updating our demand options to reflect learning across organisations, joint policies, and the benefits of being part of a larger company.
- An update to the Water Resources Planning Guidelines (WRPG) was published in March 2023. Following a review of the changes, there are several areas in which our plan may change to ensure that we comply with this updated guidance. Some of these areas are being amended in response to consultation comments.
- There are references throughout our dWRMP24 to programmes of work which were ongoing and had yet to be completed for the publication of the draft document. For example, these include schemes to improve our assessments of available water resources, a review into how we can transfer water with Wessex Water to meet peak demand, and a review to ensure that we are using the most up-to-date population forecasts in our assessments of water demand.
- Other plans are being developed concurrently with, and have links to, WRMP24, including our Water Industry National Environment Programme (WINEP), long-term Delivery Strategy (LTDS) and PR24 Business Plan. We will ensure that linkages and implications of changes made are carried through where possible and appropriate.

Consultation comments on our draft WRMP24

Our consultation comments (including those from our customer survey and webinar workshop feedback) together with the regulator queries we received, are presented in our SoR according to the main themes which emerged from the consultation and query process. These are set out alongside the changes we have made to our dWRMP24 as a result of this feedback to produce our rdWRMP24. The key consultation comment themes are:

- Update and refinement of the metering policy and options, including exploring the delivery of target demand reductions and the influence on the related leakage reduction.
- Update and refinement of the leakage options, including re-optimisation of the portfolio of actions to deliver target leakage reductions in line with changes in the metering policy and options, and testing a more ambitious leakage reduction policy.
- Testing our plan against sustainability reductions.
- Improving the alignment of our plan with that of the plan for the West Country Water Resources regional group, which supports improved collaboration in water resources management in the southwest of England.

All the comments and representations received have been taken into consideration in the preparation and publication of our rdWRMP24. The rdWRMP24 will highlight where changes have been made (in a



few cases changes may not be complete, but this will also be highlighted) and shall be accompanied by updated planning tables.

Next steps

We genuinely appreciate the time taken by our customers, stakeholders, and regulators in responding to our dWRMP24 and we welcome the positive contributions that have helped us to refine our plan.

In making the revisions to our plan, by considering both the comments received from the consultation and responding to the other identified changes that affect the dWRMP24, we believe it will be fully compliant with the latest guidance and requirements of the relevant legislation.

The rdWRMP24 is now being submitted to the Secretary of State alongside the SoR. We expect to be given approval by the Secretary of State to publish the final plan during late 2023 or early 2024. This final plan (final WRMP24) will be fully audited, and Board assured.

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1 Introduction

This report is Bristol Water's Statement of Response (SoR) to the public consultation on our draft Water Resources Management Plan (WRMP) 2024 (dWRMP24).

All water companies in England and Wales must produce a WRMP and update it every five years. We last published a WRMP in June 2019. We reviewed and updated the plan in 2022 and issued our draft WRMP24 for public consultation in November 2022. This document summarises the comments we received on the draft plan and how we have modified, or plan to modify, our plan as a result. The revised draft WRMP24 (rdWRMP24) is now being submitted to the Secretary of State alongside this Statement of Response. We expect to be given approval to publish the final WRMP24 by the Secretary of State during late 2023.

WRMPs are produced as part of a statutory process. Under Section 37 of the Water Industry Act 1991 (WIA), water companies are required to provide domestic and non-domestic customers with a reliable supply of water for domestic and business purposes. The Water Act 2003 amended the WIA 1991 by introducing a statutory requirement for water companies to produce WRMPs at least every five years, setting out how we ensure that we can meet the demand for water that we expect will arise in the future (WIA 1991 Section 37A, as amended). This legislation also requires us to consult with customers and stakeholders on our dWRMP (WIA 1991 Section 37B, as amended).

The WRMP must comply with the Water Resources Management Plan (England) Direction 2021, which came into force on 2nd July 2021. Development of dWRMP24 was informed by the structured guidance issued by the Environment Agency, and formal pre-consultation meetings held with the Environment Agency and other key stakeholders.

The WRMP24 sets out how, with the active participation of our customers, we propose to ensure that there is a sufficient supply of water to meet future demand from all our customers over the 25-year planning period from 2025 to 2050. It is one of the core business planning tools that we use to drive our business, and links strongly to our Business Plan, our Drought Plan, and our ongoing operational planning activities. It describes in detail the technical assessments we have carried out to determine the water that will be available for supply over the 25-year period, and the anticipated customer demand for water over this time to understand the future balance between supply and demand.



2 Consultation

It is a statutory requirement that we consult on our draft WRMP24. The consultation provided customers and stakeholders with an opportunity to consider the proposals we set out in our dWRMP24 in terms of managing the water resources and demand in our supply area, how this may affect them, and to provide us with any feedback and comments. Bristol Water values all feedback on our draft plan and we have taken time to review all the comments received. This Statement of Response sets out how we have taken on board the comments received and used them to develop our rdWRMP24.

Comprehensive consultations were carried out with our customers as part of the development of our draft plan, alongside the structured pre-consultation process we followed with our regulators and other key stakeholders. Our customer engagement involved several innovative approaches, such as our online customer panel, customer preference testing with games at festivals and full-day deliberative workshops. The engagement enabled us to create a best value programme of measures to deliver reliable and resilient water supplies for our customers as set out in our draft WRMP24. Stakeholder and customer engagement is a continuous process for Bristol Water: the successful engagement that we carried out for the development of the draft WRMP24 formed the early stages of our ongoing programme of engagement to ensure that our water resource planning, overall business planning and long-term strategies are fully integrated with each other and fully reflective of our customers' preferences. Full details of our pre-consultation process were described in Section 3 of the draft WRMP24.

We published our draft WRMP24 and Non-Technical Summary (along with Appendices which included a Strategic Environmental Assessment, Habitats Regulations Assessment, Natural Capital Assessment, Biodiversity Net Gain Assessment, Invasive Non-Native Species Assessment and Water Framework Directive Assessment) for a twelve-week public consultation period that ran from 28th November 2022 until 17th February 2023.

As part of this public consultation process we:

- Published our draft WRMP24 and all supporting documents on our website.
- Wrote to over a hundred consultees including regulators, other water companies, MPs, members of the press first to let them know that the consultation was forthcoming, then to say that the consultation had commenced, and finally to remind them that the consultation period was drawing to a close.
- Implemented a dedicated online feedback questionnaire, with a prize draw, to encourage direct feedback from our customers.
- Promoted our online questionnaire and the consultation in general via the Bristol Water website, on our company Facebook, Twitter and LinkedIn social media accounts, on the company's intranet and through communications with Bristol Water's Non-Household Retail Customers.

A list of the respondents who provided representations on the draft WRMP24 (including the accompanying Strategic Environmental Assessment, Water Framework Directive and Habitats Regulations Assessment reports) is provided in the table below. Through our customer engagement online questionnaire, we received 121 individual responses.



Name	Stakeholder Type
Environment Agency	Regulator / Statutory body
Natural England	Regulator / Statutory body
Ofwat	Regulator / Statutory body
Historic England	Regulator / Statutory body
Canal and River Trust	Stakeholder
CCW	Stakeholder
Mendip Hills ANOB Partnership	Stakeholder
NFU South West	Stakeholder
MOSL	Stakeholder
National Trust	Stakeholder
Arqiva	Smart technology & data provider
Everflow	Retailer
Waterscan	Retailer
Draft WRMP2024 online feedback questionnaire (121 individual response)	Customers

We have reviewed all the consultation responses and taken account of the comments made in producing our revised draft WRMP24. After the consultation period had closed, we met with the key regulator organisations; Ofwat, the Environment Agency and Natural England, to ensure that we understood their comments. This Statement of Response explains how we have considered the comments made and:

- Puts the consultation into the context of the overall WRMP development
- Reports on the comments received
- Provides a response to each comment
- Identifies areas of the rdWRMP24 that we have updated or will update and explain the actions that we have taken or will be taking in response to the consultation comments
- If we have not made changes because of comments received, we explain why.

This Statement of Response provides a summary of the comments received and our responses to them. All of the specific stakeholder comments received are set out and our responses to them tabulated in Appendix A, which also identifies where changes have been made in the rdWRMP24 that will be submitted to our industry statutory regulators alongside this document. The rdWRMP24 will highlight where changes have been made (in a few cases, changes may not be complete, but this will also be



highlighted) and shall be accompanied by updated planning tables; although it is noted that neither will have been audited or Board assured at that stage. Comments received from customers via our online feedback questionnaire and our responses to them are summarised in Section 4.12.

Our final plan (final WRMP24) will be fully audited, and Board assured. The submission date has not yet been agreed; we presume we shall be allowed to publish in late 2023 or early 2024.

This Statement of Response is being published on our website at <u>www.bristolwater.co.uk</u>, and everyone who responded via Defra has received notification of its publication. Our consultation and Statement of Response process have been independently audited and found to be compliant with the guidelines see Appendix C.



3 Revisions to our draft WRMP24

Since we published our draft WRMP24 there have been changes to national policy and relevant guidance, changes to our company structure, as well as continued programmes of work (which had not yet been finalised by draft publication). Therefore, we have made changes to the draft WRMP24. We have considered the consultation responses and regulator queries received on our draft WRMP24 and these are considered in section 4. In this section, we summarise the other main drivers of change in our draft WRMP24.

3.1 Accelerated Investment Programme

Ofwat released its draft decisions on applications to the Accelerated Investment Programme in April 2023. Ofwat have approved Bristol Water's proposals to invest £2.7m to deliver two schemes:

- Replacement of 1,000 customer supply pipes
- Replacement of 500 internal and 500 external lead pipes

This work will deliver 0.25Ml/d leakage reduction by 2024/25.

3.2 Acquisition of Bristol Water by Pennon Group

A further driver of change in our draft WRMP24 comes from a recent change within our business. In 2022, Bristol Water became part of the Pennon Group. The group comprises South West Water, Bournemouth Water and Pennon Water Services, serving 3.1 million customers across the southwest of England. Our demand options are being updated to reflect learning from both organisations, joint policies and the benefits of being part of a larger company with respect to buying power and organisational capacity.

It should be noted that the WRMP24 for Bristol Water shall continue to be published as a standalone document. Meanwhile, the Business Plan for Bristol Water will form part of one Business Plan for all companies within the Group.

3.3 Revisions to the Water Resources Planning Guideline

An update to the Water Resources Planning Guidelines (WRPG) was published in March 2023. Following a review of the changes, there are several areas in which our plan may change to ensure that we comply with this updated guidance. Some of these areas are being amended in response to consultation comments. The main areas for consideration, which were not explicitly covered by our consultation responses, are detailed below.

- Inclusion of accelerated schemes through transitional funding in AMP7; including the primary benefits to the supply-demand balance as well as additional benefits (see section 3.1).
- Review and inclusion of Ofwat's final guidance on long-term delivery strategies (LTDS).



- Review and inclusion of targets set down in Government's 'Plan for Water' and the Environmental Improvement Plan 2023.
- Reflect all data in the pre-plan years, from our base year onwards.
- Consider the findings set out in 'Updated projections of future water availability for the third UK climate change risk assessment'¹ to help demonstrate the robustness of our assessment.
- Review and evaluate the new guidance provided by 'Resilience of water supplies in Water Resource Planning Guidance Note'².
- Update the population forecasts. These should be based upon the latest local plans, using information up to 3 months old before the publication date of the plan.
- The new guidance allows companies to present options that do not provide specific supplydemand balance benefits which however offer wider resilience benefits or meet specific legislative requirements that form part of the best value plan.
- Catchment & Nature Based Solutions addressing another primary driver relating to company activity (e.g., Biodiversity & Ecosystem resilience duty (Wales) or improving water quality) are to be presented in appropriate enhancement lines in the business plan. These can be set out within the narrative of the WRMP.
- UKWIR (2022) Calculating whole life/TOTEX carbon (22/CL/01/32) should be used for calculating options' costs.
- The core pathway should include no- and low-regrets activities, as described by Ofwat (including delivery of additional option value, to allow further flexibility in the future). It must show investments that are likely to deliver outcomes efficiently under a wide range of plausible future scenarios.
- Costs presented within the final plan (WRMP24) are expected to be consistent with those submitted in the business plan at PR24.
- No further areas for consideration were identified from an environmental assessment perspective, reflecting the nature of the plan and what is already covered by our consultation responses.

3.4 Ongoing Programmes of Work

There are references throughout the draft WRMP24 to programmes of work which were ongoing and had yet been completed for the publication of the draft document. These include the following:

- **Control curves project** review of reservoir control curves to ensure that they are optimised for deployable output and operational cost, feeding into the refinement of baseline deployable output in the new Aquator model. The work aims to improve the understanding of uncertainty in the DO for the WRMP24 and links to the management of resources as described in the drought plan.
- River Severn and Gloucester & Sharpness canal yield assessment work being undertaken by the Canal and Rivers Trust (CRT) to model pumped inflows to the Gloucester & Sharpness Canal

 ¹HR Wallingford (2020) Technical Report, Updated projections of future water availability for the third UK Climate Change Risk Assessment, RT002 R05-00. Report produced for Committee on Climate Change.
² DWI (2021) Guidance note: Resilience of water supplies in water resources planning. A supplementary note to long term planning for the quality of drinking water supplies.



from the River Severn, outputs of which will ultimately feed into Bristol Water's own modelling of the Canal source. CRT's work will not conclude in time to feed into WRMP24 so will need to be incorporated into WRMP29.

- **Update of baseline deployable output modelling** will incorporate the requirement to consider resilience to a 1 in 500 year drought from the start of the planning period in 2025.
- **Strategic schemes review** we will review the West Country Regional Water Resources Group plan to ensure that our WRMP24 reflects its position in relation to the strategic schemes, noting that Bristol Water does not itself require any of the Strategic Resource Options (SROs).
- **Transfer options to Wessex Water** we have reviewed how we can transfer water with Wessex Water to meet peak demand. This has been done in consultation with Wessex Water such that our individual plans are aligned.
- **Population forecast review** according to the revised WRPG we need to check that we have the most up to date population forecasts from local authorities so this can be incorporated into our demand profiles.
- **Environmental Destination** we have proposed to deliver a suite of projects which will contribute to our Environmental Destination under the PR24 WINEP.
- Scenario Assessment further scenario assessment for the rdWRMP will include a technology scenario. Additionally, a scenario to test the impacts of potential sustainability reductions, as agreed with the Environment Agency, will be presented in our baseline within the planning tables despite such reductions not yet being agreed.

3.5 Other Developing Plans

Other plans are being developed concurrently with WRMP24, including the Water Industry National Environment Programme (WINEP), the long-term Delivery Strategy (LTDS) and the PR24 Business Plan. Both the WINEP and the WRMP feed into the Business Plan proposed investments and costs and the LTDS. Since publication of the draft WRMP24, we have agreed the abstraction investigations which will be included in our WINEP, and these have informed the risk to DO that we have agreed with the Environment Agency to consider as a scenario test.



4 Consultation comment on our draft WRMP24

This section summarises the consultation comments (including those from customer survey and webinar workshop feedback) and regulator queries we received alongside the changes we have made to the draft WRMP24 as a result of the feedback. These have been presented in this section according to the main themes which have emerged from the consultation and query process. Appendix A sets out all the detailed consultation comments received from stakeholders and our responses to them, including where we have made changes in the rdWRMP24. Appendix B sets out the regulator queries we received and the responses we provided. Where applicable a cross-reference is also provided to the relevant section of the rdWRMP24 that has been amended. In summary, the key consultation comment themes which have emerged and which we will need to respond to in our rdWRMP24 are:

- Update and refinement of the metering policy and options; including exploration of the glide path for delivering the target demand reductions and its influence on the related leakage reduction.
- Update and refinement of the leakage options including re-optimisation of the portfolio of actions to deliver target leakage reductions in line with changes in the metering policy and options and testing a more ambitious leakage reduction policy.
- Testing our plan against sustainability reductions.
- Improving the alignment of our plan with that of the plan for the West Country Water Resource regional group.

Once revisions have been made considering the comments received and the changes identified in section 3, we believe our WRMP24 will be fully compliant with the latest guidance and requirements of the Water Act 2003 (WIA 1991 Section 37A and Section 37B, as amended) and the Water Resources Management Plan (England) Direction 2017. The key themes are summarised in Sections 4.1 to 4.12 below.

4.1 Regulator Queries

Queries were submitted by Ofwat and the Environment Agency between October 2022 and February 2023, to which responses were provided including updates to the tables where appropriate. The queries and our submitted responses are set out in Appendix B. Some of the queries were generic and not specifically relevant to the Bristol Water draft WRMP24, others raised points that were reflected in subsequent consultation comments submitted by Ofwat and the Environment Agency.

- Draft WRMP24 data tables, including questions around consistency between different tables, and responding to the WRMP24 Options Costs Data Tables note issued to all companies by Ofwat/EA in October 2022.
- Consistency between the PR24 Business Plan performance commitments and demand management metrics set out in Table 2a.
- Consideration of 1:500 drought resilience in the DO baseline and where in the draft WRMP24 this is demonstrated, and whether 1:500 is brought in at the start of the period or later this relates to subsequent consultation comments.



- How programmes had been tested to ensure they meet targets and provide resilience to customers.
- Interaction between consideration of headroom and climate change scenarios
- How we have considered supply options noting that in no scenarios, even worst case, do we need supply options to meet a deficit
- How our preferred programme differs from the Ofwat Core and Least Cost programmes, noting that as our programmes are mainly driven by meeting policy targets than a deficit, there is in reality very little difference between these programmes.
- Differences between investment proposed for WRMP24 compared to WRMP19, difference in which is driven by needing to meet policy targets, and representation of WRMP19 schemes in draft WRMP24.
- Continuity from WRMP19 to WRMP24 and progress delivering WRMP19 schemes, and how we have considered progress made during AMP7 in developing the WRMP24 preferred programme.
- Derivation of costs for smart metering, and how costs are represented in Table 8 between base and enhancement.
- Evidence that in-combination environmental assessment had been undertaken.
- SDB and comparison to that presented at WRMP19, SDB development using recent actual data and consideration of levels of service and heightened resilience.
- Costs and water savings for individual leakage options.
- Table 8 completion and cumulative rather than in year presentation of metering and leakage data (costs and benefits for the Business Plan).
- Derivation of population forecasts.
- Delivery of WRMP19 PCC targets represented in draft WRMP24 subject of subsequent consultation comments.
- Data presented on options with respect to options assessments.
- Scenario testing of different abstraction reduction, demand and climate change scenarios subject of subsequent consultation comments.
- Impact of climate change scenarios on deployable output, and the relative representations at WRMP19 compared to WRMP24.
- Approach to supply side drought orders and permits and their MI/d benefits in context of different resilience scenarios.

4.2 Compliance with WRMP Direction 2022

The Environment Agency considered that our plan had complied with the Water Resources Management Plan (England) Direction 2022. We met with the Environment Agency on the 23rd March 2023 to discuss their other comments, recommendations and suggestions for improvements. All of these will be addressed in our final WRMP24.

4.3 Overall Approach

We received one comment from Ofwat regarding the overall approach; confirming that our plan delivers on expectations of setting out the drivers behind the water resource challenges faced across the



planning horizon, and the influence on the supply demand balance; and an optioneering process that sets out a reasonable number and range of options in the unconstrained and feasible lists.

There was generally a good reception from our stakeholders that the plan is heavily focussed on demand management options. The Environment Agency, Natural England, Ofwat, Canal and River Trust, CCW, National Trust and NFU South West all made comments related to how our draft plan does not clearly align to the draft plan for the West Country Water Resources Group. Alignment of our final plan to the regional group final plan is critical to Bristol Water, both for this planning round and into the future. Every effort will be made to ensure that the final plans align with the most up-to-date evidence available from both planning processes.

4.4 Water Supply

The Environment Agency was keen to ensure that we are testing our plan to include potential abstraction reductions in addition to those already considered under the enhanced and BAU+ Environmental Destination futures. We have agreed to test the impact of a reduction in licensed volume of 4.1Ml/d, reducing in AMP8 and then AMP9. Also, in response to queries from the Environment Agency, we have agreed to bring forward the Environmental Destination reductions, such that they start in AMP8. These changes are documented in Appendix A.

Our rdWRMP24 will meet the 1 in 500-year drought resilience at the start of AMP8, rather than in 2040 as previously agreed. Reductions to levels of service before 2040 shall be used if necessary (and of best value) to solve any deficit in our plan before 2040.

Ofwat also requested the groundwater yield assessments be completed for all sources and included in the final plan. This work is currently ongoing.

Other queries relating to water supplies were generally in connection to achieving equitable and sustainable supplies for or with other stakeholders such as NFU and Canal & River Trust and non-household customers. Bristol Water is committed to working with its customers and regional group partners and stakeholders to ensure the sustainable use of water across the region.

4.5 Demand Forecast

No comments were made specifically on the demand forecast.

4.6 Leakage

Most of our consultees supported our plan with respect to leakage reduction. However, concern was expressed around the high costs associated with reducing leakage at a company that is already a frontier company for leakage reduction. Some consultees, such as Ofwat, wish to see greater innovation and ambition with respect to leakage reduction. We have already investigated different glidepaths and combinations of technologies for optimally reducing our leakage in line with current government targets. For the rdWRMP24, we have done extensive scenario testing, including different glidepath



durations, different reduction targets, and testing the impact of smart metering savings being lower than expected.

Both back loaded and front loaded scenarios were tested during optioneering. This was achieved by applying leakage reduction targets during the glide path in addition to the final target. This allows the periods between targets to be treated as separate linear profiles, following the same optimisation process. However, the back loaded investment pushes unfair costs to future customers and does not meet customer expectations, while front loading the investment gives increased costs and is not justified by supply-demand balance needs.

The target to meet 50% leakage reduction by 2050 balances customer preference with least cost planning. Scenarios to achieve this target over different timescales have been tested, with results indicating that achieving the target earlier will require additional spend earlier in the programme. Following comments that we show greater ambition we scenario tested delivering the 50% reduction by 2045; however this would increase programme costs during AMP8. Given concerns around affordability we feel it is more appropriate to target the 2050 date.

This testing, combined with updated data on costs and efficiencies has allowed for re-optimisation of our leakage reduction plan to ensure it is the best value we can achieve for our customers. Targeting 2050 for reducing leakage by 50% is considered as the preferred plan for dWRMP24. These changes are described in greater detail in Appendix A.

Ofwat queried the absence of discussion on customer supply pipes in our dWRMP24. Several policies were considered and modelled targeting customer supply pipe (CSP) leakage including a CSP repair policy. However, this was not selected during optimisation, due to the significant on-going costs to maintain initial benefits. The asset renewal policy selected included a significant proportion of CSP replacement as part of a wider programme of mains renewal. Re-optimisation work has been undertaken to fully understand the customer side leakage benefits from smart metering, which will also play a significant role in delivering target reductions. Additionally, CSP maintenance is considered within other, more general maintenance policies.

Furthermore, since the publication of the dWRMP24, Bristol Water has been given permission to accelerate replacement of 1,000 customer supply pipes, 500 internal lead pipes and 500 external lead pipes in our area³. This replacement will act to reduce leakage, changing the baseline leakage level in the final plan from 2025.

4.7 Water Efficiency and Metering

Most responses acknowledged and welcomed the focus that our plan had on reducing demand from both household and non-household customers. The key areas of concern were:

• A further target is now set in the Environmental Targets (Water) (England) Regulations 2023 for the reduction of potable water supplied by water undertakers to people (in England). This is that

³ <u>https://www.ofwat.gov.uk/consultation/accelerated-infrastructure-delivery-project-draft-decisions/</u>



the volume supplied per day per head of population is at least 20% lower than the 2019-20 baseline by 31 March 2038.

- Ofwat were concerned that we are not on track to meet our current PCC commitments within AMP7.
- The planning tables contain an administrative error that suggests we will not meet the PCC target as intended over the planning period.
- A number of responses wished us to be more ambitious with respect to supporting businesses to manage their demand and engaging with retailers to support NHH demand reduction.
- Our smart metering programme is to rely on AMR technology, not AMI. Ofwat is concerned that the metering programme must be the best value for our customers; being the most effective and optimal option over the long-term and that we need to ensure that AMR technology would deliver this.
- The Environment Agency would like to know how we are going to monitor the effectiveness of demand reductions strategies put in place.

In preparation for our rdWRMP24 we have reviewed all of the metering and demand management options in our constrained list of options to ensure that they are underpinned by the best evidence available and consistent with all relevant policies, and both national and company level targets (including consistency where relevant with similar activities within the rest of the Pennon Group's area). New national targets for both household and non-household customers will therefore be incorporated into our plan. Several water efficiency options have been remodelled following new national initiatives including water labelling, and a new innovation option has been included.

As part of our wider review and in response to comments from Ofwat and others, our smart metering programme will focus on the installation of AMI smart meters as opposed to AMR. This change will: provide consistency with the Pennon Group, enabling us to achieve unit cost reductions and improve the delivery of smart technology to our household customers; help to support our leakage reduction targets; and enable better monitoring of reduction in demand over time as we implement our water efficiency programme via several different schemes.

The move to use AMI smart meter technology shall be reflected in the NHH demand options portfolio selected for our final plan, to also enable monitoring of reductions in demand and efficacy of schemes through the significant amount of data generated. Our strategy for engaging with businesses directly, and/or in collaboration with retailers, with respect to their demand is in development. Further detail will be added regarding the delivery of HH & NHH options, with a specific focus on the engagement with retailers and NHH customers which is essential for full delivery.

NHH demand options take a company-wide view that all demand options are available to all NHHs, and that benefits will be gained with specific groups of NHHs. As such, the delivery of these options is where an approach could be taken to treat small NHHs similar to HHs. We will engage with NHH customers across a number of categories to ensure that any services and devices offered are appropriate for a specific NHH.



MOSL research has indicated that wholesaler led initiatives are the most effective short-term route to delivering NHH demand reductions. Engagement with retailers will be required and lead to the development of retailer led initiatives.

There will remain uncertainty regarding whether demand-side measures can be achieved. This is evaluated through sensitivity testing in Section 16 of the dWRMP24 and optimising the existing options to resolve any deficits.

The global Covid-19 pandemic did alter the profile of demand in our area as businesses closed and people started to work from home. We have not yet seen a full recovery to pre-pandemic demand patterns and levels and as a result, despite still planning to carry out our AMP7 activities in relation to PCC reduction, we do not expect to see the change we had anticipated previously. The WRMP24 will be updated to reflect what we know about demand during the pandemic and since; and, how that has shaped our assumptions about future demand and the associated targets for PCC. We shall test our rdWRMP24 with respect to not meeting our targets in the future as this is a key area of uncertainty.

It is inevitable that meeting the national policy targets on demand management will be challenging and expensive, especially when starting from the low current baseline.

As part of the rdWRMP24 development, any errors identified in our table and in the associated text shall be corrected.

4.8 Climate Change

The Environment Agency asked for clarity with respect to how baseline river flows may change in the future in the Environmental Report; edits have been made to Section A3.3.1.2 of the dWRMP24. Section 9.3 of the dWRMP24 details how climate change is considered in the water resources assessment. Natural England has also requested more information on the ecological impacts of the plan in relation to climate change. These are part of the ongoing WINEP assessments. A new section will be included in the main report of the HRA to consider these studies. These changes are detailed in Appendix **A**.

4.9 Option and Programme Appraisal

The Environment Agency queried the testing of uncertainties within the decision-making framework. Assessment of headroom uncertainty forms part of the first step in the Best Value Planning Framework process outlined in Figure 14.1 of the dWRMP24. This headroom uncertainty is described primarily in Section 10.5 of the dWRMP24.

Further to this, we tested the plan by applying different future scenarios in order to understand our sensitivity to key areas of the plan including climate change impact, least cost options selection, changes in demand, environmental ambition and a plausible worst-case scenario (that included in its assumptions us being unable to achieve the PCC and leakage reductions we'd set out to achieve). These are presented in section 16 of the dWRMP24. This section will be extended for the final plan, to include scenarios for high/low technology and for additional sustainability reductions.



4.10 Environmental Appraisal

The Environment Agency identified improvements to the dWRMP24 that relate to the Strategic Environmental Assessment. These can be summarised as ensuring the objectives are clear, that the SEA covers all relevant policy areas, geographic and temporal extents, and that the review of policies, plans and programmes covers other water company plans and strategic programmes of work. The relevant sections and Appendices of the Strategic Environmental Assessment Environmental Report have been updated and expanded on to reflect improvements made. The Environment Agency also requested improvements regarding better visibility of how the Natural Capital Assessment and Biodiversity Net Gain Assessment have been applied or considered in decision-making. The Biodiversity Net Gain and Natural Capital Assessment Report has been updated to include more of the quantitative assessment results. The dWRMP24 will be updated in to better reflect the impact of including the natural capital metric.

Natural England acknowledged that our plan is low risk to the natural environment because it is focussed on demand management options. However, they highlighted the importance of the WRMPs addressing existing environmental problems and restoration needs, and how these may be worsened by growth and climate change. Specifically, we shall address the following fundamental issues, see Appendix A for more details:

- We have committed to several projects in the PR24 WINEP to help address issues in specific locations including from abstraction pressure, SSSI condition, INNS monitoring, reservoir option and nutrient impacts. All WINEP investigations will consider the impacts in the context of future growth and climate change.
- We shall continue with our catchment management programme, bringing this forward into our AMP8 programme.
- We agree that further assessment of Environmental Destination is required and will continue this in PR24 under the WINEP. Additionally, we will test the resilience of our plan against the agreed sustainability reduction risk to DO of 4.1 MI/d, and bring in the 3.3 MI/d Environmental Destination reduction earlier than 2050 for the rdWRMP24 modelling.

4.11 Assurance

Ofwat acknowledge the statement of assurance from our board. However, given the uplift in expenditure compared to the PR19 programme, they request that we provide "...sufficient and convincing evidence that the Board has challenged and satisfied itself on the drivers of the WRMP, and that its WRMP and the expenditure proposals within are deliverable in the context of the wider PR24 business plan proposals." Ofwat also specifically request to see that our Board understands and accepts the approach to licence capping. These changes will be made to the final version of the WRMP24 once the revised draft WRMP24 has been fully assured and the relevant parts of the business plan for PR24 has been drafted.



4.12 Public Consultation

This section summarises the responses from our customer survey. The survey was administrated internally by the Customer Research and Engagement Manager. It sought feedback on the dWRMP24 during the public consultation period which ran for 12 weeks, from 28th November 2022 to 17th February 2023.

A total of 121 respondents completed the survey. Of those, 112 respondents were from the Bristol Water Online Customer Panel. Customers were incentivised to participate by the inclusion of a prize draw with four cash prizes – one of £300, one of £100, and two of £50. The online survey took between 10-15 minutes to complete.

The questions asked and a summary of the responses were as follows:

Question 1: Did you understand the content of our draft WRMP? If not, please detail in the next box what areas you would like clarifying.

A total of 121 responses were collected for the first question with 113 (94%) respondents stating that they did understand the content of the draft WRMP. Three respondents (2%) said they did not understand the content of the draft plan and five (4%) did not know. The most common theme of the open response is that the draft WRMP24 was comprehensive and well understood.

Question 2: Do you think there might be something missing from our draft Water Resources Management Plan that we need to consider?

A total of 121 responses were collected for the second question with 78 (64%) respondents stating that they didn't think there was anything missing from the draft WRMP24. 22 respondents (18%) said they thought there was something missing, and 21 (17%) did not know. The most frequent additional comment was that the draft WRMP24 is comprehensive already, however the most common theme reported as missing by respondents was encouraging the use of grey water/recycling water.

Question 3: Are there any particular risks or opportunities which we should consider in our plan? A total of 121 responses were collected for question three, with 35 (29%) respondents stating that they thought there were particular risks or opportunities that should be considered in the draft WRMP24. 54 (45%) said they didn't think there were any further risks or opportunities draft WRMP24 should consider, and 32 (26%) did not know. The most common theme of the risks identified in the additional comments was the risk of climate change, and customer support for reducing demand/smart metering/water recycling. Increasing storage and abstraction was widely seen as an opportunity to mitigate the risks.

Question 4: In our draft WRMP24 we propose to maintain our current level of service for planned customer restrictions to supply at 1 in 15 years for a hosepipe ban, and 1 in 33 year for a non-essential use ban. Bristol Water has not implemented customer restrictions in 32 years (since 1990). This demonstrates that our actual levels of service are higher than our planned level of service.

Do you think our planned levels of service should better reflect our actual levels of service?



A total of 121 responses were collected for question four with 62 (51%) respondents agreeing that our planned levels of service should better reflect our actual levels of service. Forty-six respondents (38%) disagreed with this and 13 (11%) did not know. The most common theme of the additional comments for this question was that there should be some leeway in planned levels of service, due to the unpredictability of climate change.

Question 5: Our plan reflects the delivery of the Government expectation to deliver 50% leakage reduction (against 2017 levels) by 2050. This will significantly increase the resilience of water supply to customers and minimise the need to take additional water from the environment.

Do you support this leakage reduction policy?

A total of 121 responses were collected for question five with 109 (90%) respondents supporting the leakage reduction policy. Eight respondents (7%) did not support it and four (3%) did not know. Additional comments for this question were spread broadly across seven themes with the most common theme (7 responses) being that more action needs to be taken to reduce leakage.

Questions 6a and 6b were prefaced with the following information:

Our plan reflects the Government expectation that customer consumption will reduce to 110 litres per person per day (from a current 2021/22 average of 155l/p/d) by 2050. This will significantly increase the resilience of water supply to customers, minimising the need to take additional water from the environment.

Question 6a: Do you support this demand reduction policy?

A total of 121 responses were collected for question 6a with 93 (77%) respondents stating that they supported the demand reduction policy. 19 respondents (16%) didn't support it and nine (7%) did not know. The most common theme (13 responses) of the open response comments was that they didn't think it would be possible to reduce usage further, with additional concerns around individual circumstances such as number of children in the household, water use for medical needs etc.

Question 6b: Would you be prepared to reduce your water consumption in order to support the delivery of this target?

A total of 121 responses were collected for question 6b with 80 (66%) respondents confirming they would be prepared to reduce their own water consumption to support the delivery of the PCC target. 24 (20%) respondents said they wouldn't be willing to reduce their own consumption and 17 (14%) did not know. The majority of the open response comments (30 responses) pertained to concerns around feasibility of reduction further than already achieved.

Questions 7a to 7c were prefaced with the following information:

Our draft WRMP is focused on delivering the Government leakage and per capita consumption targets in 2050 (set out in Q5 and Q6) and as a result demand options are the focus of our strategy, with a likely bill increase of £15 per year by 2030.

Q7a: Do you agree with this approach?

A total of 121 responses were collected for question 7a with 77 (64%) respondents agreeing with demand options being the focus of the WRMP24 strategy. 21 respondents (17%) didn't agree with this



approach and 23 (19%) respondents did not know. The most common response in the open comments was that any bill increases should be proportional to usage, followed by the need to reduce mains leakage before increasing customer bills.

Q7b: What do you think about the balance of demand management over new resource options?

A total of 121 responses were collected for question 7b with 73 (60%) respondents stating they were happy with the balance of demand management over new resource options. 16 respondents (4%) said they weren't happy with it and 32 (26%) did not know. The most common themes of the open response comments for this question was that the ability to store extra or more water is required as either an alternative or alongside demand management.

Q7c: Would you prefer a strategy that included supply options (treatment work upgrades, reintroduction of small water sources, and/or a new reservoir at Cheddar) as well as demand options within the WRMP to 2050?

A total of 121 responses were collected for question 7c with ninety-two (76%) respondents preferring a strategy that included supply options as well as demand options. 11 respondents (9%) said they wouldn't prefer it and 18(15%) did not know. The most common response theme for the open comments was a preference for a strategy that included both supply and demand options.

Questions 8a & 8b were prefaced with the following information:

A second reservoir at Cheddar has been under investigation as one of the potential resource options on a regional water resource planning basis. Developing a new strategic resource in the West Country would provide an opportunity for greater resilience for the region in the face of the uncertainties associated with both climate change and delivery of the customer demand reduction targets.

Question 8a: Would you support the development of these resource options within the Bristol Water supply area?

A total of 121 responses were collected for question 8a with 106 (88%) respondents supporting the development of the new resource options within the Bristol Water supply area. Five respondents (4%%) said they would not support it and 10 (8%) respondents did not know. The main concern in the open responses was around the feasibility of Cheddar 2, e.g., sea level rising, costs of land, and impact on people and wildlife.

Question 8b: Do you support the idea of developing supply options, such as a second Cheddar Reservoir, at a strategic regional level to improve water supply resilience for the West Country as a whole?

A total of 121 responses were collected for question 8b. 104 respondents (86%) supported the development of supply options to improve water resilience for the West Country as a whole. Four respondents (3%) said they wouldn't support it, and 13 (11%) didn't know. The most common response in the open comments was in support of developing supply options.

Question 9: Environmental Destination describes how we will achieve and maintain sustainable abstraction to 2050 (and beyond), taking into account climate change impacts and future demand. It is a longer term proactive way of thinking about and accounting for environmental water needs. We have set out our long-term Environmental Destination in section 8.4 of our draft WRMP. We have



identified seven areas where we are proposing to develop our understanding of the Environmental Destination needs.

Do you support our focus in these areas?

A total of 121 responses were collected for question nine. 107 respondents (88%) supported the focus areas in order to achieve and maintain sustainable abstraction to 2050. Only one respondent (1%) did not agree and 13(11%) said they didn't know. Additional comments were spread across the themes for this question, but a slim majority (3) noted that they couldn't find any additional information about the Environmental Destination.

Question 10: Do you have any other comments you would like to make in relation to our Water Resources Management Plan?

The main theme of comments received for this question was that the plan is thorough, comprehensive, and easy to understand.



5 Next Steps

We genuinely appreciate the time taken by our customers, stakeholders and regulators in responding to our draft WRMP24, and we welcome the positive contributions and direction that have helped us to refine our plan. All the comments and representations received have been taken into consideration in the preparation and publication of our rdWRMP24.

The next steps in the development of our WRMP24 are set out below:

- Publication of this Statement of Response on our website and submission to the Secretary of State on 15th August 2023
- Submission of rdWRMP24 and data tables to Environment Agency on 29th August 2023.
- Review of the Statement of Response and rdWRMP by the Secretary of State.
- Directions from the Secretary of State to amend the Plan in line with our Statement of Response or to make other amendments prior to final approval.
- Preparation of final WRMP24.
- Checking of final WRMP24 against Secretary of State directions by the Environment Agency.
- Publication of final WRMP24 during 2024.

Our WRMP24 is one of the primary underlying documents for the PR24 Business Plan currently under development. We will ensure that changes made for the final WRMP24 are carried through into the Business Plan. As identified in section 3.6 of the dWRMP24, it is linked to several other plans, and we will ensure that linkages and implications of changes made are carried through where possible and appropriate. This is a two-way process; for example, changes made to the WINEP relating to agreed abstraction sustainability investigations since the publication of the dWRMP24 have been incorporated into the rdWRMP24.



6 Further Information

Electronic copies of this Statement of Response are available from our website at <u>Water Resources</u> (bristolwater.co.uk)

If you require any further information, please contact:

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Appendix A: Consultation Responses

Table 1: Comments from the Environment Agency

Ref	Area of issue	Issue and evidence	Implications	Information or changes	Bristol Water Responses	Changes
No.				required		made to the
						rdWRMP19
1	Major Issue R1.1:	No short-term abstraction	Failure to plan for	The company should:	On the 23rd March, BRL met	Section 5.3.2,
	Abstraction	reductions are included in	confirmed and likely	Include all potential	with the Environment Agency	8.1, 8.3.1.
	Reductions	the plan (zero in the	(unconfirmed)	confirmed or unconfirmed	and agreed to scenario test	
		planning tables). We had	abstraction reductions	abstraction reductions that	unconfirmed reductions in DO.	
		expected to see	in the WRMP risks the	are likely for AMP8 or AMP9	BRL and EA local hydrology	
		abstraction reductions at a	company's plan relying	in the plan. Changes	specialists agreed to base the	
		number of sources	on water that won't be	required to meet statutory	scenario test DO reduction on	
		accounted for in the plan.	available. This risks	targets under the Water	investigations that are currently	
		These include changes in	both security of supply	Environment Regulations	under way in AMP7 and which	
		compensation flows,	and the environment.	(2017) should be achieved	are proposed in the PR24	
		abstraction points and		by 2027. (as mentioned in	WINEP for AMP8. It was agreed	
		hands off flows and levels.		previous guidance including	that these investigations lead to	
		The EA will share details of		the 23 December 2021 EA	risk 4.1MI/d to BRL's current	
		abstraction locations this		letter titled 'Our	DO. Of the eight AMP7 WINEP	
		applies to with the		expectations for long-term	abstraction investigations, only	
		company. Where changes		environmental destination	that at P05R has yet to be	
		are not yet confirmed they		in final regional plans' to	completed - the estimated	
		still need to be included in		Regional Planning Group	potential risk at P05R is XX	
		the plan under a worst-		contacts. The company	MI/d. Further potential risk to	
		case scenario approach (or		should provide justification	DO arises on account of	
		an adaptive planning		for the timing of abstraction	investigations at R03, P30R,	
		approach) to ensure that		reductions, setting out a	P08R, and P24R. A total loss of	
		alternative supplies would		reasonable timescale after	4.1MI/d from DO will be	
		be available if needed.		investigations have been	scenario tested for the final	
				concluded. A reasonable	WRMP; approximately 1Ml/d is	
				worst-case scenario DO	at risk starting in AMP8, the	
				impact should be included	remaining 3MI/d starting in	
				within the revised plan. The	AMP9.	
				plan should clearly describe		
				what outcome the proposed	These abstraction reductions,	
				environmental destination	as a result of WFD driven	
				will have on the	investigations around serious	
				environment, and also	damage and potential	



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
				explain which sources have been screened out of the Environmental Destination and why. The sustainability reductions should be clearly set out in the plan and the planning tables.	deterioration, are not confirmed sustainability reductions. They are also different to those planned under our Environmental Destination investigation programme for AMP8, for which no loss of DO is currently envisaged, and different also to the confirmed Environmental Destination DO reductions already programmed into the plan (arising in 2050 in the dWRMP but shall be brought forward for the final WRMP).	
					At a meeting on the 14th June, the Environment Agency clarified that they expect to see the scenario test of unconfirmed sustainability reductions appear in Table 3a, row 7.3BL of the plan, rather than alongside the other scenario tests for the WRMP in Section 16. Whilst BRL shall comply with this request, we note that the guidance defines 7.3BL as follows: "Specify and identify any expected reductions in DO that are required to meet your	



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
					environmental destination as defined by EA or NRW". BRL do not "expect" these DO reductions since they are estimates from investigations that are yet to complete. Edits in Section 5.3.2, 8.1, 8.3.1	
					of the rdWRMP are highlighted.	
2	Major Issue R1.2: Environmental Destination	It is positive to see the commitment to meeting the BAU+ by 2050 in the WRMP. However, very little is planned before 2050, which puts the environment at risk for too long. The 23 December 2021 EA letter titled 'Our expectations for long-term environmental destination in final regional plans' to Regional Planning Group contacts set out our expectation for "actions to be delivered in the short, medium and long term, i.e. not just planned to happen in 2050". This expectation is to meet the	Environmental Destination delivery plans don't appear to comply with statutory requirements under the Water Environment Regulations 2017 because many abstraction reductions are planned for 2050. The company haven't justified the decision making around the pace of environmental destination delivery. The plan therefore has the potential to result in prolonged impacts on the environment. Delaying Environmental	The company need to explain the timings of abstraction reductions under the Environmental Destination to demonstrate that the plan meets the requirements of the Water Environment Regulations 2017 and Conservation of Habitats and Species Regulations 2017 . If any changes are not planned as quickly as feasible, the company will need to justify why abstraction reductions cannot be delivered sooner. The plan should clearly describe what outcome the proposed environmental destination will have on the environment, and also	Thank you for this comment. We will bring forward the confirmed ED reductions currently proposed for 2050 so that they are profiled from 2030, as discussed with EA at our meeting on 23rd March. We will consider potential risk of deployable output reduction as a result of sustainability reductions as a result of WFD driven investigations to prevent damage and further deterioration. We have proposed Environmental Destination investigations across all our abstractions under our PR24 WINEP but do not necessarily expect these to result in a greater loss to DO than	Sections 5.3.2, 8.1, 8.3.1.



Ref	Area of issue	Issue and evidence	Implications	Information or changes	Bristol Water Responses	Changes
No.				required		made to the
		the Water Environment	Destination can impact	been screened out of the	with EA ED Lead on 23rd March	rawRMP19
		Regulations (2017) by	resilience by:	Environmental Destination	that we should not at this stage	
		2027, or if this isn't	a. limit the	and why.	assume further risk on account	
		feasible the letter asks	opportunity to		of the PR24 WINEP	
		plans to describe "how	improve the	The company should review	Environmental Destinations	
		you plan to meet the	environment and	the volumes of the licence	programme. In undertaking	
		current expectations as	means that any	reductions in line with	these investigations, we will	
		soon as possible after	benefits will not be	National Framework and	consider nature recovery as	
		2027". Table 3a for each	realised until later.	clearly set out the reasoning	well as maintenance of the	
		water resource zone in the	b. diminishes the	and the justification for any	status quo. Since publication of	
		planning tables shows the	ability to spread the	differences.	the dWRMP, additional	
		deployable output	cost of		abstraction sustainability	
		reductions related to	implementation over a		investigations have also been	
		environmental	longer period, leading		added to the WINEP. These are	
		destination. These	to potential significant		now described in the rdWRMP	
		reductions, have all been	future increases in		sections 5.3.2, 8.1, 8.3.1.	
		for 2050/51 contrary to	customer bills.		Following discussions with EA	
		our expectations set about	c. facilitate the		we will test the resilience of the	
		above.	continuation of an		WRMP to an agreed risk to DO	
			approach that requires		of 4.1MI/d on account of these	
		It is difficult to understand	short term		investigations via a scenario	
		any differences between	interventions that		test but included in Table 3a,	
		Bristol Water's proposed	increases the risk to		row 7.3BL (see response to ref.	
		abstraction reductions for	the security and cost		1). All the activities described	
		compared to the WRNE	of supply.		of supply in the context of	
		Any differences have not	it shot clear to		demand is reduct	
		heen clearly explained or	regulators that the			
		justified	abstraction reductions			
		justineu.	proposed will deliver			
			the environmental			
			improvements			



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the
			required under the WFD regulations or the aims of the WRNF.			
3	Major Issue R1.3: Licence level reductions required in the plan	The Water Resources Planning Guideline states that: For each sustainability reduction you should provide: • a description of the change being made, including the licence and deployable output changes • the timing of the reduction • the location • the reason for the reduction	Without this level of detail, it is not possible to test how any proposed sustainability reductions will impact the environment.	Provide a detailed breakdown of the company's environmental destination and sustainability reduction scenarios at a licence level (including licence number and licence point), clearly detailing and justifying when these are expected in the plan and use sensitivity testing to consider earlier delivery to support this justification.	A Table has been added to the rdWRMP (section 5.3) describing which sources are considered likely to be at risk of sustainability reductions on conclusion of AMP7 / 8 investigations, when this risk is likely to arise, and the scale of the risk as discussed with local EA hydrologists in April 2023. Risk from Environmental Destination related reductions is also described in section 5.3.	Section 5.3.
4	Major Issue R2.1: Cheddar 2 - SRO does not feature in the company's adaptive/final plan	This option is a SRO but does not feature in the company's preferred plan – this needs to be included in the Final Plan.	Its omission is inconsistent with regional plan and SRO submission. Failure to comply with WRPG 2.2 'Where relevant, your plan should reflect the regional plan unless there is clear justification for not doing so. Your WRMP should explain how you have reflected the regional plan and why	Liaise with Pennon Group regarding Cheddar 2 option and align the water company plan with the regional plan and the SRO. WRCR Regional Plan – 31 Jan 2023 (page 65) states: WCWR regional group and water companies will aim to continue to develop strategic resource options to deliver new supply schemes (such as Mendip Quarry, Cheddar Two and	A clear statement summarising the joint position of Bristol Water, Wessex Water and South West Water with respect to the Cheddar 2 reservoir shall be provided through the regional planning process. This will include preferred date for delivery to meet 1 in 500 drought resilience and allocation of costs and benefits across water companies in line with the RAPID gate two submission within the final	Section 12.7.4.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the
			you have selected your preferred programme'. Also, 'You should provide a clear justification for any differences between the preferred programme in the regional plan and your preferred programme in your WRMP. This is so that they can be understood by government, regulators, customers and stakeholders'.	Poole effluent reuse augmentation) following the RAPID process to be 'shovel- ready', allowing them to be used in the event of a less favourable future occurring.	regional plan which shall in turn feed into the respective final WRMPs for the relevant companies within the regional group. A brief description of the SRO and the history of Cheddar 2 to explain its absence from WRMP24 for Bristol Water and how it will be included in the region has been provided in Section 12.7.4.	rdWRMP19
5	Moderate Issue I1.1: The contents and objectives of the draft WRMP SEA are not clearly set out. Without a clear understanding of what the plan entitles and its key objectives it is difficult to ascertain whether the appropriateness	There is a lack of clear outline of the contents and main objectives of the plan makes the SEA not fully compliant with point 1 of Schedule 2 of the SEA regs.	Potential compliance risks makes the process vulnerable to legal challenge, including a challenge that the SEA process may not have identified the right SEA objectives (i.e. against a set of clearly set out plan objectives) and consequently, all likely significant environmental effects as a consequence.	Section 2.3 of the Environmental Report should be expanded to provide a clear outline of the contents of the WRMP, consistent with the draft WRMP. This expanded section should explicitly set out the objectives of the draft WRMP and whether these are sufficiently ambitious and meet the requirements of relevant policy and guidance including the national and regional objective of	Section 2.3 of the Environmental Report has been expanded in order to ensure the Environmental Report works more effectively as a standalone document. It is now explained why the WRMP is necessary and its objectives. Cross-references to sections in the WRMP24 have been added to assist reading and understanding. The SEA was undertaken in accordance with the methodology and SEA objectives developed at the Scoping Stage which included	Section 2.3.



Ref	Area of issue	Issue and evidence	Implications	Information or changes	Bristol Water Responses	Changes made to the
100.				required		rdWRMP19
	of the SEA objectives.			improving the natural environment. Cross- references to sections in the draft WRMP would also assist reading and understanding both documents.	the statutory consultation process. Narrative on whether the WRMP is sufficiently ambitious has not been added as this is outwith the scope of the SEA process.	
6	Moderate Issue I1.2: PPP review missing water company plans and strategic programmes of work	The permissions, plans or projects (PPP) review in Appendix 2 does not include water company plans and strategic programmes of work such as Regional Plans, Drought Plans (DWMPs) and SROs. DWMPs are not considered in the SEA. These issues aren't a matter of compliance, however, it could mean that insufficient consideration may have been given to certain aspects relevant to the purpose of the WRMP or given sufficient weight to drought and resilience issues in the SEA objectives.	Potential for objections from region or adjoining water companies if opportunities for co- ordinated and collaborative action on cross-boundary issues have not been appropriately understood and explored. Insufficient consideration may have been given to certain aspects relevant to the purpose of the WRMP or given sufficient weight to drought and resilience issues in the SEA objectives.	Further clarity should be provided in the Environmental Report to demonstrate accordance with regional plan and no significant cross-boundary conflicts or issues that could affect the approval and adoption of the WRMP. The PPP review in Appendix 2 should include other water company plans and strategic programmes of work such as Regional Plans, DWMPs, Drought Plans and SROs.	The Policies, Plans and Projects appendix has been expanded upon to include WRMP and Drought Plan's (DP's) of neighbouring water companies, as well as plans from the regional bodies West Country Water Resources (WCWR), Water Resources West (WRW) and Water Resources South East (WRSE). These plans have also now been considered where necessary in the Environmental Report.	Policies, Plans and Projects appendix and in Environmental report.
7	Moderate Issue	Potential for	There is a clear	There is an opportunity to	The Environmental Report	Section 2.3.
	11.3:	environmental	mandate in the 25	better link the	(Section 2.3) has been updated	
		enhancements linked to	Year Environmental	Environmental destination	to better link the Environmental	



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the
		key policy objectives around leaving the environment in a better place are not clearly covered in the SEA. This may reduce the effectiveness of the plan, stakeholder/customer understanding and/or present a moderate risk to the environment	Plan of leaving the environment in a better state with one of the key issues identified being unsustainable water abstractions. It is not clear in the Environmental Report how this aspect of environmental ophancement links	that needs to be considered as part of the draft WRMP to the SEA process in terms of environmental enhancements. Opportunities for environmental enhancements in design, delivery and / or maintenance should be included when developing the delivery of the preferred	destination that needs to be considered as part of the WRMP24. Opportunities for environmental enhancements in design, delivery and / or maintenance are considered as part of the SEA process (via the review of plans, policies and programmes and development of assessment objectives). It is noted that the preferred plan is	rdWRMP19
			with the SEA process.	plan.	management options only.	
8	Moderate Issue I1.4:	The Environmental Report does not clearly demonstrate / justify that it has adequately considered the full extent of the area that could potentially be affected. The temporal scope of the future baseline for each environmental topic is unclear. Future baseline is set out mainly based on national level information. There is limited information on limitations and assumptions associated with the future baseline.	This relates to legislative compliance, and it may reduce stakeholder/customer understanding and/or present a moderate risk to the environment. There is potential for adequacy of the SEA process to be undermined which could make adoption of the WRMP vulnerable to legal challenge. Inadequate appreciation of local environmental problems limits the	The description of the baseline would benefit from specific references to cross- boundary issues associated to each of the SEA topics. Where no potentially significant cross-boundary issues are expected due to the nature of the plan, this should be noted so that it is clear that they have been considered as part of the SEA process. Limitations on the data around future baseline is acknowledged in section 4.3 of the Environmental Report.	Section 4.2 of the Environmental Report has been expanded upon in order to provide further context of the spatial extent of the SEA and where trans-boundary issues have been considered as part of the Environmental Baseline. It also explains that as the current SEA only considers demand- side options, trans-boundary issues are considered within the baseline but considered very unlikely. Appendix 3 - Environmental Baseline, has been expanded, with every environmental section now containing a trans-boundary sub-section describing the area	Section 4.2.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the
			potential for the WRMP to deliver meaningful solutions and set appropriate objectives.	Bristol Water should consider whether information available on current and predicted future baseline flows could provide more detail on future baseline conditions on key environmental issues such as those associated with designated sites and climate change effects. Limitations and assumptions associated with future baseline should be presented as part of the topic by topic review presented as Appendix 3. This should include clarification on the temporal scope of the assessment per topic.	immediately surrounding the assessment area. The SEA was undertaken in accordance with the baseline and methodology presented at the Scoping Stage which included the statutory consultation process. It is felt that issues with temporal scale are sufficiently covered under section 4.3.	
9	Moderate Issue I2.1: Decision making framework uncertainties	Bristol Water have clearly set out how it has selected its preferred (best value) plan using the decision- making framework, but although they reference the testing of uncertainties, there is no evidence of these uncertainties in their options selection.	It is not known what was testing, or how robust the testing of the uncertainties was. Section 12.5 Options Appraisal (Tech Doc Page 144) Testing the WRMP – Section 16 (Tech Doc page 206)	Detail needs to be added on the uncertainties and how these were tested for clarity. It is recommended that the company includes this detail in the final WRMP.	The text in Section 14.2 of the dWRMP was misleading and this text has been re-phrased for the rdWRMP. This sentence was referring to the uncertainty analyses described in section 16 and 10 of the dWRMP: testing of long-term uncertainties is described in Section 16 of the dWRMP; headroom uncertainty	Section 14.2.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
					is described in Section 10 of the dWRMP text.	
10	Moderate Issue I2.2: Decision making detail in assessments	There is not the required visibility in the report to confirm the minimum practice has been applied for each ecosystem service outlined in the WRPGSG	It is unclear if a qualitative assessment has been undertaken for most of the ecosystem services. It has been assumed that the text supporting the explanation of the monetary values is a substitute qualitative assessment, and also been assumed that the provided monetary values for multiple ecosystem services have undertaken quantitative assessments for the relevant ecosystem services. The report could benefit from detail for the qualitative assessments.	It is suggested that the company submission should include sections dedicated to a qualitative and quantitative assessment and provide greater detail throughout the report relating quantitative data to land-use areas, e.g., ha of woodland, and physical values, e.g., carbon stocks.	Quantitative assessment results have been included in the appendices of the NCA and BNG report, quantitative results will be written up to be included in the main section of the report for the final WRMP24. In regards to the qualitative assessments, these were undertaken at stage 1 but the results were not reported as they did not add significant value to the report. A proportionate level of assessment (as recommended in the supplementary guidance 'Environment and society in decision making') was carried out, thus, for Stage 4 NCA the supporting text for the quantitative assessment (as queried by the EA in the comment). It was felt another qualitative assessment at this stage would have not aided the assessment. However, where necessary, when a quantitative	NCA appendices and BNG report and Section 13 of main WRMP text.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
					assessment was not appropriate, for example for water purification, a qualitative assessment was undertaken at Stage 4.	
					If supply side options had been included in the preferred programme, more qualitative assessments for other ecosystem services would have been carried out, to be in line with the proportionate assessment approach set out in the methodology.	
11	Moderate Issue I2.3: BNG	The NCA report only considered BNG with mitigation data for Preferred Programme options and not the constrained list.	It is not known if this impacted the decision- making and/or modelling process and whether or not integrating BNG with mitigation into the constrained feasible list would have influenced the dWRMP option outcomes	Clarify the impact of the natural capital metric on the decision-making process to exclude supply side options.	A BNG assessment with mitigation was not carried out for options in the constrained assessment, as a proportionate approach was followed, as recommended in the supplementary guidance Environment and Society in Decision Making. Furthermore, as per the methodology, which was consulted on, BNG assessments with mitigation were only conducted on supply side options that were carried forward into the preferred programme. Theoretically, changing the scores to integrate	N/A


Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
					BNG with mitigation into the constrained feasible list may have an influence on the dWRMP options selected, or it may not depending on how the scores were weighted. However, this process would go against the methodology and proportionate assessment approach that was followed. Additionally, the natural capital metric was included in the decision-making process, additional text has been added to the WRMP24 to clarify the impact of including the natural capital metric.	
12	Moderate Issue I2.4: Overall modelling	The NCA outputs were not used directly in the multi- criteria investment modelling and were instead used to inform the scoring of each option within the SEA.	It should be explored the level of impact the NCA outputs had and the relative weighting they provided to the overall modelling and decision-making process.	Further clarity on the drivers behind the investment modelling process showing no supply side options is required.	As described in Section 14.2.1, the NCA informs the scoring of the "SEA" metrics used to optimise the options in the modelling tool developed by HR Wallingford. Thus, the NCA outputs are used in the decision-making process.	Section 14.2.1
13	Moderate Issue I3.1:- Ensure the draft plan includes evidence of how demand management will be achieved	There is no mention of monitoring of demand options specified in the plan. There is no Alternative plan/options if these are not delivered on time. The majority of the	If some/all of the demand options are not delivered on time or delayed, then there is a danger that the demand savings which are required will fail.	More detail is required on how the success of demand management will be monitored, and alternatives should demand reductions be less than planned,	BRL are undergoing a process of reassessing the costs and benefits from smart metering policies, this has been used for re-optimisation and reprofiling of the smart metering option. BRL have reviewed the	Section 16.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
		options (for example PCC and Smart metering) are predicted to be delivered towards the end of the planning period. (page 189 Tech Doc Section 14.4)	There needs to be confidence that the demand management will work and how this will be monitored (how monitor and how far in advance they will change if they fail to meet your targets). For example: Universal smart metering delivered over 15 years between 2025 and 2040. 31% properties smart metered by 2030, 62% by 2035, 93% by 2040. This is relatively slow roll-out relying on Demand Management to maintain a surplus in the first part of the plan so it's important that it is achieved.	including a more ambitious smart metering programme.	 implications of aligning with Southwest Water in the deployment of AMI meters and the potential unit cost benefits provided by the merger. By moving to AMI it is recognised that the success of demand efficiency options will be easier to monitor. Any additional cost requirements for individual options will be considered, as well as including detail of where this monitoring can be shared between options and where it cannot. A re-optimisation process has been undertaken reviewing the timeline of proposed activities to provide the most appropriate plan to meet the supply-demand needs for the region. Further commentary will also be provided expanding how the planned savings may be delivered and monitored. There will remain uncertainty regarding whether demand- side measures can be achieved. This is evaluated through 	
					This is evaluated through sensitivity testing in Section 16	



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes	Bristol Water Responses	Changes made to the
						rdWRMP19
					of the dWRMP and optimising	
					the existing options to resolve	
					any deficits. This process will be	
					re-done for the rdWRMP.	
14	Moderate Issue	This may reduce the	There is uncertainty /	Including the Scoping	As set out in the SEA	Section
	14.1: It is not	effectiveness of the plan	lack of clarity around	Report as one of the	assessment framework in Table	A3.3.1.2.
	possible to fully	in terms of the suitability	river baseline flows	Appendices will help with	5-1, SEA objective 3.2 is "To	
	ascertain how	or appropriateness of the	and how these may	improved clarity of how	protect flows and resource	
	the comments	options considered,	change in the future	some of the comments have	levels of surface waters and	
	around baseline	stakeholder/customer	due to climate change	been materially addressed.	groundwaters". This is	
	flows	understanding and/or	and any additional	The Environmental Report	evidenced and assessed	
	(interpreted as	present a moderate risk to	restrictions such as	should include more	through current water	
	being river flows)	the environment	increased	information on existing and	resources availability. The	
			environmental	future river baseline flows	Environmental Report includes,	
			protection. This could	and clearly state where the	at Section A3.3.1.2, the current	
			make the prediction of	second part of EA's	water resources availability for	
			potential significant	comment 4 and EA's	sustainable abstraction	
			effects more difficult	comment 6 have been	information from EA	
			and / or potentially	addressed in the actual	documentation. As set out in	
			result in non-	Environmental Report. It	the WFD Assessment Method	
			compliance with	should refer but not be fully	Statement, that information	
			national policy	dependent contained in the	has been used as the Step 2	
			objectives around	separate WFD report. (BW	screen based on magnitude of	
			leaving the	Appendix E1, Table A-1	hydrogeological/ hydrological	
			environment in a	Pages 116-117)	impact and water body context	
			better place;		to either exclude options from	
			improving resilience to		assessment where they are	
			drought and		negligible or low impact, or	
			minimising		identify which activities require	
			interruptions to water		progressing to Step 3	
			supply.		assessment and in which water	
					bodies. Between the SEA	



Ref	Area of issue	Issue and evidence	Implications	Information or changes	Bristol Water Responses	Changes
No.				required		made to the
					Sconing Penort foodback and	rdWRMP19
					the dW/PMP SEA Environmental	
					Report Figure A 6 has been	
					added as stated in Table A-	
					1 We have amended Section	
					A3 3 1 2 to state that this is	
					consistent with the evidence	
					used in screening for the WED	
					assessment - this addresses FA	
					comment 6	
					Regarding futures. At present	
					there is no suitable consistent	
					information from which to set	
					out future baseline river flows	
					across our operating area for	
					screening the environmental	
					resilience of potential options	
					in the SEA Environmental	
					Report. Environmental	
					Destination is a key area for us	
					and we are working as a Region	
					to develop our understanding,	
					and have included a	
					comprehensive review of	
					Environmental Destination	
					implications across all our	
					sources under the PR24 WINEP.	
					We are also planning to	
					continue our programme of	
					abstraction sustainability	
					investigations as explained in	



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
					the rdWRMP section 8.3. Also in our dWRMP at Section 9.3 we set out how we have used climate change models for understanding changes in future hydrology that may impact the water resources assessment, noting this is not the same as a full review of future baseline river flows across our area. We have amended Section A3.3.1.2 to clarify that the SEA is based on current water resources availability at this time and not future water resources availability, until further understanding has been developed. Note this is for the environmental assessment of options and not the yield	
15	Moderate Issue I5.1: The company's baseline deployable output is not 1 in 500 year drought resilient throughout the planning period.	The water company has presented a variable baseline Deployable Output in its data tables up to 2040 and appears to have adjusted baseline Deployable Output according to reduced levels of service provided in that year up until 2040.	To ensure the baseline supply-demand balance reflects the entirety of the deficit.	Ensure that baseline Deployable Output (6BL) is presented to reflect 1:500 supply resilience from the first to the last year of the planning horizon. Reductions to levels of service before 2040 should be presented as an option, with the Deployable Output	assessment of options. The WRMP now reflects the changes made to the guidance in March 2023 and new agreement with the Environment Agency; 1 in 500 year level of drought resilience is now achieved at the beginning of the planning period as instructed. It is not anticipated that changes in LoS	Section 11.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
		This is in conflict with the WRPG and table instructions, which requires baseline Deployable Output before reductions (6BL) to present 1:500 supply resilience across the planning horizon. Deployable Output as presented in its current form does not result in an incorrect supply-demand balance, but does cause option benefits to be inaccurate.		benefit of a level of service reduction set out in 6.3FP in table 3b (and table 3e where relevant for DYCP). This option must also be set out in table 4 (option appraisal table) and table 5 (preferred option benefits table). You should make it clear that the option description reflects the WAFU benefits from a defined lower level of service such as 1 in 200 up to the point at which you move to 1 in 500. Your final planning table 3c will then be automatically calculated to reflect the benefits from your reduced levels of service alongside your other options. The benefit of levels of service reduction in table 5 must match the value presented in table 3b in 6.3FP as both are DYAA	will be required in order to solve a deficit for the fWRMP however, this will be reviewed as the plan is finalised. Drought resilience to 1 in 500 years is referenced throughout the document but particular in section 11 of the dWRMP.	
16	Moderate Issue I6.1: Non- household consumption	The company forecast a 5.2% reduction in non- household consumption by 2037/38 from 2019/20 levels. This does not fully	As per government expectations, all companies should assist non-household users to sustainably	The company should consider additional options, in collaboration with retailers, to reduce non- household consumption	BRL recognise the importance of reducing demand from NHH customers and have identified a number of options such as business efficiency vists and	Changes will be made in the final plan, Sections 12 and 15



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the
						rdWRMP19
		deliver against the 9% reduction sought in the Environmental Improvement Plan in contribution to the water demand target. A greater level of reduction is expected in contribution to the Environment Act demand target. Water companies should work with retailers to improve water efficiency and incentives for the non- household sector. We expect this to be a priority for the next 5-10 years.	reduce their water use. Reducing non- household demand plays an important part in reducing overall water demand and thereby helping to maintain customer supplies and protect the environment.	including the assessment of smart metering for all non- households (if it has not already done so). Where further reduction in non- household consumption is not considered possible this should be clearly justified.	encouraging NHH smart metering in the WRMP. We would welcome a collaborative approach with the retail market to deliver the potential savings from these schemes and recognise the added potential from promoting AMI smart metering and integrating smart meter readings with CMOS. Further re-optimisation work has been done to fully understand the delivery of Environmental Improvement Plan NHH targets and provide the best value to BRL customers, and whether anything further is required to meet BRL supply-demand balance needs. Further commentary will be provided in the WRMP on BRL strategy for NHHs.	
17	Moderate Issue I7.1: Ensure the company's revised draft plan takes account of any decisions on its scheme acceleration	The company has submitted one or more schemes to be considered for acceleration in the remainder of AMP7. An announcement around the outcome of this	If any of the company's schemes are being accelerated, the current representation of these schemes in the plan will not be fully accurate.	Ensure the company's revised draft plan takes account of any decisions on its scheme acceleration proposals where applicable.	Confirmation of the accepted accelerated schemes was made available on Monday 3rd April (https://www.ofwat.gov.uk/wp- content/uploads/2023/04/A0- accelerated-process-draft- decisions.pdf). The scheme accepted for Bristol Water was	Section 6.5.



Ref No.	Area of issue	lssue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the
	proposals where applicable.	acceleration process is expected in March.			for accelerating customer supply pipe replacements in the Bristol area, reducing leakage by 0.25MI/d by 2025.	rdWRMP19
					The acceleration of this scheme will update the baseline leakage figures that the WRMP24 assessment uses. These changes will be implemented in the final plan (text update in Section 6.5 of the dWRMP).	
18	Recommendation 1:	Ensure the environment is protected now and in the future. We expect the company to review and confirm whether it is planning for future changes to its abstractions. There could be further sustainability reductions to be included in the draft plan. even if unconfirmed. These need to be programmed for the appropriate time in the planning horizon and shown on an adaptive plan. Our environment destination guidance			We are committed to ensuring protection of the environment and where possible improvement. For the rdWRMP we have programmed the agreed Environmental Destination reductions to arise earlier in the planning period, and we have modelled a scenario having discussed and agreed feasible risks to DO on account of ongoing and upcoming WFD driver abstraction investigations, with reductions brought in during AMPs 8 & 9; see response to ref. 1 for more information.	Section 5.3.2, 8.1, 8.3.1.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
19	Recommendation 2:	Provide a clear statement about the future of Cheddar two reservoir. The company should work with the West Country Water Resources group and with Wessex Water and South West Water to ensure this strategic resource is reflected consistently across all relevant plans.			See response to ref. 4.	Section 12.7.4.
20	Improvement 1:	Ensure Strategic Environmental Assessment (SEA) objectives are clear, that the SEA covers all relevant policy areas, geographic and temporal extents, and that the permissions, plans or projects review covers other water company plans and strategic programmes of work.			The review of Policies, Plans and Projects (Appendix 2) and the Environmental Baseline (Appendix 3) have been expanded upon in the Environmental Report to include WRMP and DWMPS of neighbouring water companies, as well as plans from the regional bodies West Country Water Resources (WCWR), Water Resources (WCWR), Water Resources South. The assessment objectives in Section 5 of the Environmental report have been reviewed in light of these updates. It is noted that the SEA was undertaken in accordance with the baseline and methodology	Appendix 2 and 3 and Section 5 of Environmental report.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
					presented at the Scoping Stage which included the statutory consultation process.	
21	Improvement 2:	Provide clear evidence of uncertainty testing in the company's decision- making approach.			We have tested our plan to the biggest areas of uncertainty and in line with the scenarios set out in both the Environment Agency Water Resource Planning Guideline, and the Ofwat common reference scenarios. This scenario testing process demonstrates how our plan is resilient to a range of risks, and the possible timing of the impacts of the risks. We have tested these uncertainties across the planning period to understand whether risks are likely to manifest in the near future, or later in the planning period. This information is described in Section 16 of the dWRMP.	Section 16.
					As describe in ref 1. we shall also test the plan under a scenario of additional sustainability reductions, over and above what has already been planned and included in our assessment.	



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
22	Improvement 3:	Ensure the draft plan includes evidence of how demand reductions will be achieved, how success of demand management will be monitored, and alternatives should demand reductions be less than planned. This should include a more ambitious smart metering programme to achieve demand reductions sooner.			See response to issue, ref 13.	Section 16
23	Improvement 4:	Clarify how future changes in river flows due to climate change have been accommodated in the draft plan.			See response to issue, ref 14.	Section A3.3.1.2.
24	Improvement 5:	Ensure the baseline deployable output reflects the company's supply resilience in a 1 in 500 year drought from the start of the plan. The company should update its planning tables to reflect this, however before 2040 it can use a reduction in level of			See response to issue, ref 15.	Section 11.



Ref No.	Area of issue	Issue and evidence	Implications	Information or changes required	Bristol Water Responses	Changes made to the rdWRMP19
		service to 1:200 as the option to manage table deficits until it can confirm a level of service of 1:500.				
25	Improvement 6:	Ensure the plan delivers non-household demand reductions in line with the Environment Improvement Plan water demand targets. The company's plan should aim to deliver 9% non- household demand reduction from 2019/20 levels by 2037/38.			See response to issue, ref 16.	Changes will be made in the final plan, Sections 12 and 15
26	Improvement 7:	Ensure the company's revised draft plan takes account of any decisions on its scheme acceleration proposals where applicable.			See response to issue, ref 17.	Section 6.5.

Table 2: Comments from Natural England

Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
27		Natural England understands that the Preferred Options selected in the dWRMP are focused on demand and leakage reduction, and are low risk to the environment in themselves. However,	Consultation with the Environment Agency and Natural England has been ongoing to develop the proposed scope of the PR24 WINEP investigations, including a programme of Environmental Destination	SEA Environmental Report (Section 2.3) and HRA report.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		dWRMPs also need to address existing environmental problems and restoration needs, and how this may be worsened by growth and climate change. In line with this, the HRA and SEA need to consider the plan overall and not just the new options.	investigations across all Bristol Water sources and catchments to understand the potential impacts on water availability in the face of growth and climate change over the longer term. A programme of WFD investigations around existing licences is also proposed, and discussions are ongoing with the Environment Agency as to any additional licences to be included in the investigations where there is an impact pathway to a designated site. The conclusions of these investigations will allow for any licence modifications to be made.	
			These aspects have been better reflected in the SEA Environmental Report (Section 2.3) and HRA report.	
28		In the case of the Severn Estuary SAC/Ramsar and Blagdon Lake SSSI we consider that further assessments are required to ensure that future risks, particularly in the face of climate change and nutrient enrichment, are appropriately managed. To the best of our knowledge the Company is proposing to address potential water resource issues in the PR24 WINEP for both of these sites and we support the need for this. However, more intervention is required as a matter of urgency to address nutrient enrichment in Blagdon Lake,	Bristol Water has committed to a number of projects in the PR24 WINEP which will help to address issues at Blagdon Lake SSSI. These include Blagdon Macrophytes - 08BW100032, Reservoir Operations and Nutrient Cycling - 08BW100005, SSSI Condition Assessment - 08BW100023, INNS Monitoring - 08BW100030. Bristol Water will also include the Blagdon licence in the cross company Environmental Destination investigation. Bristol Water will also continue work on the River Congresbury Yeo to mitigate impacts of the reservoir on the downstream river, including	New section in HRA report and updates to SEA, Section 2.3 and Appendix 3.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		including satisfactory implementation of PR19 WINEP requirements.	consideration of interactions between flows and migratory barriers. Bristol Water will also continue to deliver the catchment management programme which has seen phosphorus concentrations and algal bloom frequencies reduce in the Mendip reservoirs over the past ten years. This has been discussed with Natural England, and was discussed again during the dWRMP comments meeting on 18 April 2023. A new section will be included in the main report of the HRA to consider existing licences and reflect Bristol Water's commitment to continued investigation through the WINEP or WFD studies. The SEA will also be updated (Section 2.3 and Appendix 3) to include reference to the SSSI investigations	
29		Natural England consider that the commentary on Environmental Destination, both within the dWRMP, and the Regional Plan produced by West Country Water Resources, does not provide sufficient evidence to conclude that the obligations can be met with the current dWRMP. Further assessment is required to better understand future water needs for nature recovery. This is clearly relevant to the conclusions of the SEA conducted as part of the Bristol Water dWRMP, and whether the supply-demand assessment is robust.	Bristol Water is in agreement that further assessment around Environmental Destination is required - the company has agreed to comprehensive programme of ED investigations in PR24 WINEP across all abstractions, which will include consideration of nature recovery as well as maintenance of the status quo. Since publication of the dWRMP, additional abstraction sustainability investigations have also been added to the WINEP. These are now described in sections 5.3.2, 8.1, 8.3.1 of the dWRMP. Following discussions	Sections 5.3.2, 8.1, 8.3.1.



Ref No.	Relates	Comment	Bristol Water Responses	Changes made to the rdWRMP19
	to			
			with EA we will test the resilience of the WRMP to an agreed risk to DO of 4.1MI/d on account of these investigations via a scenario test as described in response to ref.1. We have also agreed to bring in the 3.3MI/d ED reduction earlier than 2050 for the rdWRMP modelling. This will ensure that our assessment of supply in the context of demand is robust.	
30		Whilst the effects of climate change appear to have been considered in relation to future water availability, the ecological interactions that could stem from a changing climate have not. For example, it is entirely feasible that water level drawdown in Blagdon Lake SSSI could lead to negative effects that are more pronounced than seen to date. The interaction between low water level and higher temperatures could quite conceivably lead to hitherto unseen effects on nutrient availability and damaging hyper- eutrophication, even in the relatively near future. Further work is required to address these risks.	As outlined in the response to comment ref 28 above, Bristol Water has committed to a number of WINEP projects which will focus on Blagdon SSSI. Specific to this comment, and following discussion with NE during WINEP development, we have included Reservoir Operations and Nutrient Cycling - 08BW100005. We will develop the scope of this project with NE, but it will include consideration fo climate change interactions. A new section will be included in the main report of the HRA to consider existing licences and reflect Bristol Water's commitment to continued investigation through the WINEP or WFD studies. The SEA will also be updated (Section 2.3 and Appendix 3) to include reference to the SSSI investigations.	New section in HRA report and updates to SEA, Section 2.3 and Appendix 3.
31		Natural England is satisfied that the HRA is a clearly identifiable document which has indicated that none of the options within the	31a: Noted.	Changes will be made in the final plan.



Ref No.	Relates	Comment	Bristol Water Responses	Changes made to the rdWRMP19
	to			
		preferred plan, which are all demand-side	There are sufficient WRMP cycles before	
		and leakage reduction actions, have the	the supply-side options within the	
		potential for likely significant effects. We are	alternative programmes are required, to	
		also comfortable with the proposal for 'down	allow completion of the necessary Stage 2	
		the line' appropriate assessments for the	Appropriate Assessments.	
		possible future supply side options,		
		mentioned under scenarios 6 and 8,	31b:	
		recognising that at present the HRA process	Consultation with the Environment Agency	
		is not complete.	and Natural England has been ongoing to	
			develop the proposed scope of the PR24	
		However, Natural England advise that the	WINEP investigations, including a	
		HRA for Bristol Water's WRMP24 should	programme of Environmental Destination	
		have included an assessment including the	investigations across all Bristol Water	
		use of existing licences, taking into account	sources and catchments to understand the	
		all changes that are relevant to future risk.	potential impacts on water availability in	
		These include but are not limited to: future	the face of growth and climate change over	
		growth requirements, climate change	the longer term. A programme of WFD	
		effects, changes in guidance, policy,	investigations around existing licences is	
		legislation, conservation objectives or SACOs	also proposed, and discussions are ongoing	
		(Supplementary Advice to Conservation	with the Environment Agency as to any	
		Objectives), and any evidence of protected	additional licences to be included in the	
		site deterioration/condition change. This	investigations where there is an impact	
		includes cumulative and in combination	pathway to a designated site. The	
		effects. In the case of Bristol Water, the	conclusions of these investigations will	
		above is particularly relevant to the Severn	allow for any licence modifications to be	
		Estuary SAC and Ramsar in relation to	made.	
		migratory fish species which are interest		
		features. The HRA should consider	With regards functionally linked habitat for	
		functionally linked habitat for the designated	the migratory fish species of the Severn	
		migratory fish species. It is noted that in	Estuary SAC and Ramsar, the HRA Stage 1	
		some supply options considered, the HRA	Screening will be reviewed against the	
		screening has concluded no LSE during		



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		operation due to existing structures currently blocking fish passage. Option P08, selected under scenarios 6 and 8, is an	proposed scope of Bristol Water's investigations into barrier issues.	
		example. We suggest that this conclusion is not compliant with the requirements of the Habitats Regulations as all necessary measures should be put in place to protect	Supply side measures are only required in the alternative programmes, and after 2062 (in the dWRMP). As such, there are multiple WRMP cycles before this date	
		the future integrity of the SAC. We understand that an investigation to address this issue of Bristol Water owned assets that are barriers to fish migration (ie the combined relationship between abstractions	when the findings of the PR24 WINEP investigations can be incorporated into the supply-demand balance and assessments updated accordingly.	
		and structures) is proposed in the PR24 WINEP. We advise that appropriate investigations to address the issues described above for the Severn Estuary SAC	31c: The transfer to Wessex Water (18.26/28) is an existing transfer (Newton Meadows) with a change in operational regime to provide Wessey Water during the pack	
		WRMP review in PR29. Natural England have also noted that Wessex Water's WRMP24 proposes two options	demand period. No infrastructure works are required on Bristol Water's part. No further donor or bulk transfer schemes are understood to have been selected by other	
		(18.26/28 which are selected) that require the import of water from Bristol Water's supply. Wessex Water have made the assumption in their WRMP24 that there will	water companies which would require Bristol Water to assess. A section on transfers will be included in	
		be no adverse effect on integrity of Habitat sites, including those associated with the Severn Estuary, but say this needs to be confirmed with Bristol Water. Natural	the main report of the HRA. It is noted that there is a possibility that the transfer to Wessex Water will be increased but that this would level of increase would be	
		England advise Bristol Water to provide commentary on this donation and its	unlikely to bring about the selection of supply options in the final WRMP best value plan.	



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		assessment in their WRMP24, ensuring that HRA requirements are met.		
32		 WRMPs are prepared for water management and set the framework for future development consents of projects listed in the EIA Directive, including groundwater abstractions and impoundments. As such, WRMPs meet the requirements set out in the SEA Regulations requiring SEA to be completed. Natural England's advice on the documents submitted as part of the SEA for this dWRMP are as follows: The SEA should take into consideration the following : Sites of Special Scientific Interest (SSSIs) and Habitats sites Protected landscapes (where relevant) Biodiversity - habitats and species of principal importance for the conservation of biodiversity (priority habitats and protected species) Species recovery Climate change Marine Conservations Zones (where 	Comments noted and we thank Natural England for its feedback. This is taken as a generic point rather than one that requires a response or edits.	N/A.
22		relevant) Natural England is broadly satisfied that the	As part of parallel work Bristol Water has	Changes will be made in the final plan in
33		SEA has identified all impacts from Bristol	engaged extensively with both Natural	Section 2 and Appendix 3.
		Water's WRMP24 Preferred options on SSSIs,	England and Environment Agency, to	
		but similarly to the HRA, it fails to address	determine risks and issues associated with	
		possible future impacts of their current	existing licences and potential impacts of	
		activity and licensed abstraction potential,	operations as a water company. These risks	



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		especially in light of growth and climate	and issues have been developed into the	
		change. In particular, Natural England are	PR24 WINEP that currently includes a	
		concerned about the effects that increased	programme of Environmental Destination	
		drawdown may have on Blagdon Lake SSSI. A	investigations across all our sources and	
		previous WINEP investigation identified	catchments to understand the potential	
		measures that could be taken to increase the	impacts on water availability in the face of	
		resilience of the plant communities within	growth and climate change over the longer	
		the lake in the face of excessive and	term; and, a programme of WFD	
		prolonged drawdown. It seems entirely	investigations around serious damage	
		appropriate that these are acted upon within	caused by existing abstraction and	
		the WINEP. There is also growing evidence to	potential deterioration likely to arise due	
		show that climate change, water availability	to abstraction growth.	
		and the effects of hyper-eutrophication can		
		act negatively in combination. Blagdon Lake	Bristol Water is still, at the time of writing,	
		SSSI is already hyper-eutrophic with	discussing with the Environment Agency	
		excessive nutrient levels and impacted plant	which licences need investigation based on	
		communities, and this is reflected in its WFD	their WRGIS database which does include	
		water body status. It is entirely feasible that	categorisation of abstractions according to	
		higher temperatures and lower water levels	potential impacts on designated sites.	
		could lead to increased algal blooms and		
		deteriorating water quality, in part linked to	To address the issues at Blagdon Lake SSSI,	
		the release of legacy pollution in lake	Bristol Water has committed to a number	
		sediments. Natural England requests that	of projects in the PR24 WINEP which will	
		this should be investigated through the PR24	help to address issues at Blagdon Lake SSSI.	
		WINEP.	These include Blagdon Macrophytes -	
			08BW100032, Reservoir Operations and	
		We note that Bristol Water have a supply	Nutrient Cycling - 08BW100005, SSSI	
		side option (PU6) in their WRMP24 which	Condition Assessment - 08BW100023, INNS	
		would not be selected until 2062 and only in	ivionitoring - U8BW100030. These have	
		a worst case scenario. The option involves a	been discussed with Natural England, and	
		catchment management grant to reduce	were discussed again during the dWRMP	
		diffuse sources of nutrient pollution into the	comments meeting on 18 April 2023.	



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		Mendips lakes. In light of the degraded quality of Blagdon Lake SSSI we suggest that this is considered for implementation significantly earlier.	Since the catchment management programme was started in 2015, nutrient water quality has improved and algal bloom frequency has reduced in the Mendip reservoirs. We will introduce the catchment management programme at the start of the planning period, which will reflect the ongoing nature of the programme and requirement to maintain a water company presence in the catchments to maintain the benefit. The SEA (Section 2 and Appendix 3) will be updated to better reflect the potential future baseline and activities that are either in operation or at planning stage as	
34		Whilst climate change is indeed factored into the supporting modelling for the dWRMP in relation to water availability, the likely effects in terms of ecological damage are not. The interaction between nutrient pollution and water availability is perhaps the most obvious area of concern (see the example of Blagdon Lake SSSI described in 1.2). The dWRMP does not consider how much water is needed to support nature-based solutions to combat climate change in the company supply area, for example the water	Climate change and its interaction with ecology will be considered alongside growth under our Environmental Destination WINEP programme. We have worked with NE to develop the WINEP programme as described in responses above - this will consider the nutrient status of the SSSIs and potential interactions with climate change as well as other factors and we will continue to work to control nutrients entering the reservoirs, noting that these are sourced elsewhere from Bristol Water. In response to previous NE comments, we have included a 'Water	N/A.



Ref No.	Relates	Comment	Bristol Water Responses	Changes made to the rdWRMP19
	to			
		resource required to help achieve the objectives of the England peat action plan.	Resources for Peat' investigation, although we are as yet unsighted how much interaction there is between BRL licences and peat reserves in the region. It is also noted that Government agencies should arguably be playing a greater and more effective role in regulation of polluters in the catchments.	
35		Comments on WFD are a matter for the Environment Agency, however, Natural England has a role in commenting on assessments regarding Protected Areas for biodiversity, and the risk of deterioration of groundwater dependant terrestrial ecosystems (GWDTE) that are also SSSIs or which support priority habitats or species. This includes the need to assess possible increased abstraction due to growth or from new schemes. Natural England's view is also that failure of, or increasing an existing failure of monitoring specifications (formerly called FCTS) for groundwater dependant SSSIs, related to abstraction induced drying, would constitute a deterioration, even if this is in combination with climatic drying. Natural England expects that WFD requirements related to biodiversity are addressed in the dWRMP. We are particularly keen to understand how the less than Good status of Blagdon Lake is addressed through the dWRMP.	The WFD assessment has considered any impacts on GWDTEs as a result of any change in groundwater abstraction associated with any options. The WFD assessment has considered any impacts on any status elements on Blagdon Lake (GB30943135) associated with any options in terms of: - the potential for deterioration (WFD Assessment Objective 1), - the potential for impediment to Good target status (WFD Assessment Objective 2 - Blagdon Lake is a HMWB so this objective does not apply to the biological status elements) - the potential for the impediment of success for any measures published for this water body in RBMP2 (WFD Assessment Objective 3 - this will be cross-checked against RBMP3 measures for the final WRMP, subject to them being published in time for inclusion).	N/A.



Ref No.	Relates	Comment	Bristol Water Responses	Changes made to the rdWRMP19
	to			
			For new options the WRMP is required to test compliance with the RBMP objectives.	
			There is no requirement through the	
			WRMP to address existing WFD failures in	
			water bodies. Selected WFD failures are	
			investigated through the WINEP at the	
			request of the Environment Agency.	
36		Natural England is concerned that the	Bristol Water has engaged extensively with	N/A.
		Environmental Destination set out in Bristol	both Natural England and Environment	
		Water's dWRMP is not sufficiently robust to	Agency, to determine risks and issues	
		ensure compliance with SEA requirements.	associated with existing licences and	
		Where the Company's dWRMP is relying on	potential impacts of operations as a water	
		the Regional Plan SEA or/ and the	company. These risks and issues have been	
		Environmental Destination within the plan,	developed into the PR24 WINEP that	
		to meet its environmental obligations, it	currently includes:	
		must still satisfy itself that the obligations set	 a programme of Environmental 	
		out in the policy are met. This includes	Destination investigations across all our	
		making sure that water dependant non-	sources and catchments to understand the	
		European SSSIs, non-designated water	potential impacts on water availability in	
		dependant habitat (e.g. floodplains), priority	the face of growth and climate change over	
		wetland and river habitats have been	the longer term;	
		included in the Regional Plan Environmental	 a programme of WFD investigations 	
		Destination modelling. The regional plan's	around serious damage caused by existing	
		ambition is heavily based on the business-as-	abstraction and potential deterioration	
		usual plus (BAU+) scenario, which is not	likely to arise due to abstraction growth.	
		sufficiently robust to ensure that these		
		habitats and sites are protected. Species	Bristol Water is still, at the time of writing,	
		obligations and newer obligations from the	discussing with the Environment Agency	
		Environmental Improvement Plan (EiP)	which licences need investigation based on	
		should also be included within the	their WRGIS database which does include	
		Environmental Destination. WRMPs must	categorisation of abstractions according to	
		include a pathway to meet the Company's	potential impacts on designated sites.	



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		nature recovery obligations in line with duties and timetables in the policy. There is no sufficient assessment in either Bristol Water's dWRMP24 or the West Country regional plan of how much water is needed to allow for species and nature recovery in light of climate change and growth, therefore in Natural England's view, Bristol Water's dWRMP, as currently written, should be amended accordingly to meet these obligations. This should include the volume of water resource required, and the deliverability and scale of measures to provide necessary water for the environment in the appropriate locations. We do appreciate that the assessment we are requesting above is complex, and that it needs to involve other Competent Authorities, stakeholders and partners. We also recognise that PR24 WINEP provides an opportunity for companies to further investigate the above obligations in terms of their Environmental Destination. Uncertainties around the water requirements to satisfy Environmental Destination needs as described earlier in this	Bristol Water will bring forward the Environmental Destination reductions (3.3Mld) currently proposed for 2050 so that they are profiled from 2030, as discussed with Environment Agency at our meeting on 23rd March 2023. It was agreed with the Environment Agency Environmental Destination Lead on 23rd March that we should not at this stage assume further risk on account of the PR24 WINEP Environmental Destinations programme.	
		section need to be reflected in supply- demand conclusions.		
37		We note and support the array of demand- side measures proposed in the dWRMP. Demand management interventions should	Thank you and see response to ref. 13 & 16.	Section 11 and 16



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		be timetabled from as early as possible in the plan to meet the objectives, policies and timetables for nature recovery. The assessments requested above should be used to inform the scale and speed of any further reductions required.		

Table 3: Comments from Ofwat

Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
38		Overall, there are some areas of Bristol Water's plan that are in line with our expectations for this stage of a draft WRMP. In particular, Bristol Water's draft plan delivers on expectations of: • setting out the drivers behind the water resource challenges faced across the planning horizon, and the influence on the supply demand balance; • an optioneering process that sets out a reasonable number and range of options in the unconstrained and feasible lists.	Thank you.	N/A.
39	Demand management ambition and outcomes	The UK SPS for Ofwat states reducing demand for water can relieve pressures on water supply and increase our resilience to extreme drought. Water companies must act to reduce demand for water in a way that represents value for money in the long-term. We expect all companies to use their WRMPs to show how they will meet long term water demand targets including:	As highlighted in Section 7.3 of our dWRMP, as a frontier leakage company, we are already below the national average needed to achieve the PIC by 2030. Our preferred plan is to reduce leakage further, and meet the 50% reduction target by 2050. We will continue to work with our supply chain partners, academia and other water	N/A.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		 halving leakage across the industry by 2050, in comparison to 2017-18 levels; reduce per capita consumption (PCC) to 110 litres per head per day (l/h/d) by 2050. 	companies, through the Ofwat Innovation Fund, UKWIR and club projects, to develop new and innovative methods to prevent, find and fix leaks in the most cost effective manner.	
			Our household customers have indicated a strong preference for support on water efficiency and we understand that customers primarily look to us for advice and assistance to help achieve these savings. As discussed in Section 7.3 and 15 of our dWRMP, our plan looks to meet these needs with sound, achievable ideas combined with useful and easy to install equipment whilst broadening our engagement strategy through an increased focus on education underpinned by further research and partnership projects. Bristol Water intends to meet the target of 110 l/h/d by 2050.	
40	Demand management ambition and outcomes	A further target is now set in the Environmental Targets (Water) (England) Regulations 20234 for the reduction of potable water supplied by water undertakers in England to people in England. This is that the volume supplied per day per head of population is at least 20% lower than the 2010 20 baseling by 21 March 2028. We	Noted – we will consider this target in our programming.	N/A.
		expect companies to demonstrate how they		



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		will deliver against this target in their final WRMP.		
41	Demand management ambition and outcomes	We welcome that Bristol Water plans to reduce leakage by 50% by 2050. The company also indicates it plans to meet the per capita consumption (PCC) dry year annual average target of 110 l/h/d by 2050 but it should ensure its plan reflects this ambition.	As discussed in Section 7.3 and 15 of our dWRMP, our plan looks to meet the 110 I/h/d PCC target with sound, achievable ideas combined with useful and easy to install equipment whilst broadening our engagement strategy through an increased focus on education underpinned by further research and partnership projects. We are undertaking a review of the data that underpins our demand options portfolio to ensure its accuracy and consistency, where applicable, with our regional group partners to ensure that the suite of options selected do meet the target reduction as intended.	N/A.
42	Demand management ambition and outcomes	We welcome a reference in the company plan to the ambition to reduce distribution input by 20% by 2037-38 announced by Defra6. The company states in its main technical document that, alongside leakage reduction, its plan delivers these target requirements. This reduction should be delivered through a combination of reductions in leakage losses, household consumption and non-household consumption.	Thank you. Our intention is to reduce demand through a suite of different options, including leakage losses, household consumption and non- household consumption in order to meet the relevant targets.	N/A.



tes to C	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
and T ction n regy u ir o o c c t t s t t s t t f i n d t f i n f t f i n n d t t n n t t n t t n t t t t t t t	The company has considered 97 demand management options within its draft WRMP unconstrained list. However, it has provided nsufficient evidence to explain how it has optimised its demand management strategies. The company sets out the costs of options which show that a number of more cost-effective feasible options are available to deliver PCC reductions than some of those selected in the preferred plan. For example, the preferred plan includes an Appliance subsidies (rebates for water efficient devices and appliances) option at an average ncremental cost (AIC) of 1581 p/m. However, there are a number of significantly more cost-effective feasible household demand reduction options (for example teaky Loos' Wastage Fix: large scale targeted fixes) which are not selected by the preferred plan. The company has also presented a much cheaper water efficiency programme for the Defra acceleration process in December 2022 which could be delivered to meet its current performance targets.	Edits to the WRMP text will better describe the optimisation process. Demand options were not only optimised to reduce costs but to meet Government led targets within the specified timeframe and, where applicable, reduce negative environmental impacts and increase positive environmental impacts. Since the dWRMP, in response to consultation comments and to improve consistency with South West Water's plan / policies and the regional group, a number of changes have been made to the options. The plan will be re- optimised to ensure that final plan presents the best value solution for Bristol Water customers and the environment. The final best value plan may be different to the least cost plan.	Section 12.5.
very of V ormance d mitments la WRMP19 T ets t	We are concerned that in the draft WRMP data tables the company does not forecast to deliver its PR19 performance commitment evels (PCL) for PCC based on its draft WRMP. The company has confirmed that it is striving to reduce PCC as much as possible with the aim of delivering its PR19 PCL. However, the	The COVID-19 pandemic effected customer demand. We experienced a shift in water consumption from non- household to households due to increased working from home during the lockdown periods, and there is evidently an ongoing preference for working from	Changes will be made in the final plan, Section 16.
ve	es to nd tion gy i gy i gy i i i i i i i i i i	And tionThe company has considered 97 demand management options within its draft WRMP unconstrained list. However, it has provided insufficient evidence to explain how it has optimised its demand management strategies. The company sets out the costs of options which show that a number of more cost-effective feasible options are available to deliver PCC reductions than some of those selected in the preferred plan. For example, the preferred plan includes an Appliance subsidies (rebates for water efficient devices and appliances) option at an average incremental cost (AIC) of 1581 p/m. However, there are a number of significantly more cost-effective feasible household demand reduction options (for example Leaky Loos' Wastage Fix: large scale targeted fixes) which are not selected by the preferred plan. The company has also presented a much cheaper water efficiency programme for the Defra acceleration process in December 2022 which could be delivered to meet its current performance targets.erry of rmance itimentsWe are concerned that in the draft WRMP data tables the company does not forecast to deliver its PR19 performance commitment levels (PCL) for PCC based on its draft WRMP. The company has confirmed that it is striving to reduce PCC as much as possible with the aim of delivering its PR19 PCL. However, the comment considers the forecast to proceed to a forecast to preceded that in the draft WRMP.rmance timentsIntervent performance commitment levels (PCL) for PCC based on its draft WRMP.rmance to reduce PCC as much as possi	es toCommentBristol Water Responsesand tion management options within its draft WRMP unconstrained list. However, it has provided insufficient evidence to explain how it has optimised its demand management strategies. The company sets out the costs of options which show that a number of more cost-effective feasible options are available to deliver PCC reductions than some of those selected in the preferred plan. For example, the preferred plan includes an Appliance subsidies (rebates for water efficient devices and appliances) option at an average incremental cost (AIC) of 1581 p/m. However, there are a number of significantly more cost-effective feasible household demand reduction options (for example Leaky Loos' Wastage Fix: large scale targeted fixes) which are not selected by the preferred plan. The company has lop resented a much cheaper water efficiency programme for the Defra acceleration process in December 2022 which could be delivered to mete its current performance targets.Bristol Water Responsesery of sWe are concerned that in the draft WRMP data tables the company does not forecast to deliver its PR19 performance commitment levels (PCL) for PCC based on its draft WRMP data tables the company does not forecast to deliver its PR19 performance commitment it mentsBristol Water Responsesry of sWe are concerned that in the draft WRMP data tables the company does not forecast to delivering its PR19 PCL. However, the aim of delivering its PR19 PCL. However, t



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		realistic expectation of where it will be in 2024-25 but also acknowledges it is still working to understand the long-term impacts on water use post pandemic. We expect the company to deliver reductions to meet the 2024-25 PR19 performance commitment levels and WRMP19 targets and continue to consider that companies should have the strongest possible incentives to deliver reductions in per capita consumption. We do not consider it is valid for companies to expect additional customer funding to address deficits resulting from under delivery in the current or previous periods. We expect the company to review its proposals in the context of its most up to date water use and PCC performance data, for its final WRMP.	lifted as we have not seen a complete return to pre-pandemic water consumption. As a result, whilst we are committed to delivering the activities for AMP7 from our previous plan and have a post-COVID Per Capita Consumption (PCC) strategy being implemented over the remaining years of this AMP, we think it unlikely that these activities will deliver the PCC targets (135.81/h/d by 2024/25) previously anticipated. We will report on this in our 2022-23 environment agency annual review. Our WRMP24 forecast therefore reflects the PCC reductions we think we can realistically achieve from our current position, accepting that customer demand patterns have changed. We are committed to delivering the policy targets to reduce the use of public water supply in England per head of population by 20% from the 2019 to 2020 baseline reporting figures, by 31 March 2038 and 50% reduction in PCC overall by 2050. By ensuring that our WRMP24 reflects the realistic starting position for this strategy we are making sure that the options selected to deliver this target are appropriate.	



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			We will test a scenario in which the baseline position reflects our PR19 performance commitment levels for PCC; this will be included in the final version of the WRMP.	
45	Leakage	We welcome that Bristol Water has set out its plans to reduce leakage by 50% from 2017-18 levels by 2050. However, the company only tests another target of 30% reduction by 2050. Insufficient evidence is provided why this alternative test was chosen, especially how different it is to the national target, or why more ambitious targets were not tested. It is unclear how the testing has influenced the selected target presented in the draft plan.	Further clarification will be provided demonstrating that the selected plan follows an optimal pathway rather than a strictly linear pathway. This follows a least cost optimisation to a set end of glide path target leakage (50% by 2050). Both back loaded scenarios and front loaded scenarios were tested during the optioneering, by applying mid-glide path leakage reduction targets that would either delay or accelerate the need for leakage reductions respectively to avoid penalisation in the optimisation. Details for their rejection will be provided in the WRMP. However, in brief, the back loaded investment pushes unfair costs to future customers and does not meet customer expectations, while front loading investment gives increased costs and is not justified by supply-demand balance needs. Further glide path durations have been tested and this process will be detailed showing that the best cost benefit option has been chosen.	Sections 12.7.1 and 15.1.3.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			BRL recognise that their current frontier leakage performance means that the leakage reduction required over the period to 2050 to meet 50% reduction targets is lower than industry average. The target balances customer preference with least cost planning, moving beyond required levels from a low baseline is challenging and will bring additional costs. BRL have scenario tested achieving 50% leakage reduction over different timescales. Testing has indicated that achieving the target earlier will require additional cost earlier within the programme.	
46	Leakage	As we outlined in November 2021, we expect near-term interventions being identified in WRMPs to deliver long-term targets such as a 50% leakage reduction and 110l/h/d per PCC to be set in the context of the optimum long- term strategy. Setting a glidepath to meet long-term targets and outcomes should enable an efficient and deliverable long-term programme to be identified. The company's plan only considers linear leakage reduction profiles, with the 50% leakage reduction by 2049-50 profile selected as the preferred option. The company has not considered alternative investment profiles such as one that considers non-linear reductions. The company should provide sufficient and convincing evidence to justify why a linear	See response to ref. 45.	Sections 12.7.1 and 15.1.3.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		profile – rather than doing more or less in the near term – is optimal from a timing of investment perspective.		
47	Leakage	The company is proposing a three-year average leakage reduction over the 2025-30 period that will deliver a level of leakage 24.1% below the 2019-20 baseline by 2029- 30. This represents a further reduction of only 2.9% beyond the companies 2024-25 performance commitment level of 21.2%. As the company further develops its forecast leakage performance trend from draft WRMP to final WRMP it should ensure it is demonstrating sufficient ambition to challenge itself to reduce leakage levels.	See response to ref. 45.	Sections 12.7.1 and 15.1.3.
48	Leakage	Bristol Water has not discussed its policy with regards to customer supply pipe leakage. We are encouraging companies to evaluate the benefits of a common industry approach to addressing leakage on customers own pipes. We expect companies to provide a view on the benefits of a common industry approach in their statements of response and final WRMPs. We will support companies in the development of a common approach but expect the industry to lead on the development.	A number of policies target CSPL including smart metering, asset renewal and continuation of BRL CSP repair policy. The asset renewal policy selected includes a significant proportion of CSP replacement as part of a wider programme of mains renewal. This will provide lasting benefits to the network. Smart metering will also enable further CSP leak detection and follow up repair work. Re-optimisation work has been completed to further understand the customer side leakage benefits from smart metering which will play a significant role in delivering target reductions.	Section 12.7.1



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			An accelerated programme of CSP replacement has also been developed by BRL and approved by Ofwat (https://www.ofwat.gov.uk/wp- content/uploads/2023/04/A0- accelerated-process-draft-decisions.pdf) this will target 0.25 MI/d of leakage ahead of AMP8 and has been accounted for in rdWRMP option optimisation.	
49		Per capita consumption (PCC) We welcome that Bristol Water has also set out it plans to meet the per capita consumption (PCC) target of 110 l/h/d by 2050. However, the company's draft WRMP planning tables do not clearly show this is the case with a slightly higher figure presented in 2049-50. The company should revise its planning tables for its final WRMP to reflect its ambition. The data provided by the company to date indicates that the company is only proposing to deliver a three-year average PCC level that is 1.8% below the 2019-20 baseline by 2029-30. However, this represents a three-year average level that is 4.5% higher than its PR19 performance commitment level for 2024-25. As the company further develops its forecast PCC performance trend from draft WRMP to final WRMP it should ensure it is demonstrating sufficient ambition to challenge itself to reduce PCC levels.	Bristol Water is committed to achieving the policy target for PCC of 110l/h/d. The draft WRMP and associated tables should reflect this and any errors in this data will be rectified for the final plan.	Section 15.1.3



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft
50		Business demand Bristol Water's draft WRMP presents a 2029- 30 business demand (non-household consumption) level that is 2.3% lower than the 2019-20 baseline level. However, the company's plan also indicates an increasing business demand across the 2025-30 period. We have previously highlighted the opportunity for companies to deliver business demand reductions and our expectations for WRMPs that deliver significantly improved levels of water efficiency in the business sector. We expect the company to clearly justify an ambitious strategy for non-household demand reduction in its final WRMP to inform its PB24 business plan	See response to ref. 16.	Changes will be made in the final plan, Sections 12 and 15
51	Metering	The company assumes that a universal smart metering programme delivered over 15 years from 2025 is the most cost-effective means of installing meters to reach effective full meter penetration by 2040. The company explains that whilst the optimised least cost plan suggests smart metering would not be required until 2037 driven by the supply demand balance, this would not provide sufficient confidence that it could meet both leakage (due to lack of monitoring data) and PCC targets. The company should provide sufficient and convincing evidence that this rate of metering is optimal over the long- term including how this interacts with the	See response ref. 13 As explained in Section 15.1.3 of our dWRMP, Bristol Water's metering programme is universal, but billing using the meter is not compulsory as the area is not defined as water stressed. Universal metering helps to identify leaks and therefore is necessary to contribute to the leakage reduction targets. Metering is however supported by our customers as the most fair way of charging for water use, and metering contributed to PCC reduction. As a result,	Section 16



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		selection of other demand management options. Bristol Water should explain further the methods through which it plans to deliver its universal metering programme as it is not currently in a region classified as water stressed.	we shall continue to run 'no regrets' switching campaigns and lobby the government for a change in legislation to permit compulsory metering in our supply area.	
52	Metering	The company's plan assumes the use of automated meter read (AMR) smart meters rather than the smarter advanced metering infrastructure (AMI) technology. However, it plans to review this during the consultation phase of the draft plan to establish whether customer willingness to pay would indicate a preference for the greater information available from more advanced metering. As described in the PR24 final methodology the company's decision to install AMR over AMI meters should include compelling evidence that justifies why this represents the best value approach to meeting a supply-demand balance or delivering long-term strategic outcomes. The company also needs to provide sufficient and convincing evidence that the unit costs of its AMR meter installations are efficient with the costs currently presented being higher than PR19 unit costs and current outturn	See response ref. 13.	Section 16
53	Development	The company has confirmed that its forecast	Noted. This shall be included in the final	Changes will be made in the final plan
	of demand	PCC and business demand (non-household	WRMP.	section 15.
	reduction	consumption) performance trends are still in		
	performance	development for its PR24 business plan and		
	trends for	subject to uncertainty. As the company		



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
	final WRMP and business plans	further develops these performance trends from draft WRMP to final WRMP it should include the reasons for changes and explain the impact of any revisions on the optimisation and best value option selection in its preferred plan.		
54	Development of demand reduction performance trends for final WRMP and business plans	We expect the company to provide sufficient and convincing evidence in its final WRMP to justify why its selected targets for demand reduction (leakage, PCC and business demand) represent the best value approach to meeting a supply-demand balance or delivering long- term strategic outcomes. This should include evidence of target testing and a clear explanation of the company's decision-making process.	See Response ref. 45 regarding leakage. For PCC reductions and non-household demand reductions, the options selected are informed by the optimisation modelling which evaluates the options according to a number of metrics (cost, carbon cost and environmental) and identifies optimal start years in order to achieve the pre-defined targets (for PCC in the dWRMP and for both PCC and NHH demand in the rdWRMP). Any deviation from the optimised plan will be discussed and justified in the rdWRMP.	Sections 12.7.1 and 15.1.3.
55	Development of demand reduction performance trends for final WRMP and business plans	As stated in our PR24 final methodology, we expect consistency between final WRMPs, company long-term delivery strategies and business plans at PR24. Any areas of variance between final (and published) planning frameworks and business plan submissions need to be fully explained and supported by compelling evidence. When making changes companies should demonstrate that customers and the environment are not or will not be worse off.	Bristol Water is committed to evolving our water resources so that that future generations can depend on them. The aim of our plan is to protect people, homes and businesses as well as the rivers and reservoirs in our area and the wildlife that depends on them. The role of responsible business is one of stewardship for sustainable living, and what we do and how we do it is driven by our purpose – supporting the lives of people and the places they love for	Section 3.6



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			generations to come. Every effort will be made to ensure that the final WRMP, company long-term delivery strategies and business plans at PR24 align. Where relevant we will also aim to align with those other companies within our regional group. However, it should be noted that programmes for the various strategies and plans do not necessarily match which makes alignment more difficult. Where changes need to be made to improve the outcomes for our customers and/or the environment, these will be highlighted.	
56	Assessment of water needs	A robust assessment of current and future water needs is critical as it drives the gap between supply and demand and therefore drives the scale of investment required for the 2025-30 period and beyond. We welcome that the company's supply demand balance starting point for the draft WRMP24 is similar to its forecast for the same point in the final WRMP19. This means that the overall outcome of the WRMP19 as funded at PR19 has been delivered in the round. However, some components to the supply-demand balance have changed, including those that reflect underperformance. Where a step change in supply-demand balance between WRMP19 and WRMP24 is not sufficiently justified as	Noted and see response to ref. 44. All changes shall be described within the final plan (as per the dWRMP in Section 1.1.1 and 3.3) and changes to WRMP19 forecasts will also be reflected in 2022-23 EA annual review.	Sections 1.1.1 and 3.3.


Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		being due to changes in scenarios or planning assumptions, and may instead be as a result of non-delivery or underperformance, this will be taken into account at PR24 in the assessment of enhancement funding		
57	Assessment of water needs	It is important that Bristol Water steps up effort on WRMP19 demand-side options delivery and on meeting PR19 commitments ahead of WRMP24. We expect the company to make substantial efforts on demand reduction for the rest of the 2020-25 period, to ensure that WRMP19 forecast, and PR19 performance commitment targets are met annually, and to set firm foundations for delivering WRMP24.	Noted and see response to ref. 44.	Changes will be made in the final plan, Section 16.
58	Assessment of water needs	Bristol Water has used methods and data appropriate to the scale and complexity of the problem that it needs to address and has recognised the different problems across its area. The company's problem characterisation is clearly presented. Bristol Water has used a 55 year planning horizon to set its WRMP in the context of the West Country region and the rationale is clearly presented. The key changes to the planning problem since WRMP19 are clearly described in the narrative. Bristol Water should clearly provide assurance in its final WRMP that abstraction reductions are not double counted when sustainability reductions are	Noted. We will clearly set out the DO at risk from WFD driven abstraction reductions (no deterioration and serious damage), versus reductions which are produced to arise on account of Environmental Destination requirements, such that these will not be double counted.	WRP Table 3.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		combined with environmental destination scenarios.		
59	Assessment of water needs	Bristol Water has updated its supply and demand components for WRMP24 in line with the Water Resources Planning Guidelines (WRPG) and changes from WRMP19 are clearly explained. However, the groundwater yield assessment has not been completed for all sources. Bristol Water should ensure this is completed ahead of the final WRMP and a clear explanation of the impact on the final WRMP should be provided. Further explanation is required on changes in headroom since WRMP19. A baseline deficit is not showing until later in the planning period from 2042-43.	Groundwater yield assessment: The remaining groundwater yield assessments will be undertaken with an aim that they are completed in time for the final WRMP assessment and reporting activities. Headroom: Further clarification around the changes since WRMP19 will be added to the final WRMP in Section 10.	Section 10.
60	Assessment of water needs	Bristol Water has tested the timing of meeting 1 in 500 year drought resilience which has shown this can be met by 2025 without the need for new supply options, but are not planning to move to 1 in 500 until 2040. Bristol Water has confirmed it has set out its correct glidepath to 1 in 500 year drought resilience in its WRMP tables, however this is insufficient and requires commentary in the main plan when discussing levels of service. Bristol Water has highlighted a typographical error in its commentary on actual level of service with regard to percentage risk score and will correct this in its revised draft plan. The	Bristol Water will adjust the timing that 1 in 500 year resilience will be met in accordance with the revised Water Resource Planning Guidelines released in March 2023 for the final plan and adjust the WRMP text accordingly to correct errors and describe the planned level of service glidepath. We shall review our Deployable Output to ensure that it is consistent with the WRPG 5.3.	WRP Table 3



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		company should review its baseline Deployable Output (DO) to ensure that it is consistent with the Water Resources Planning Guidelines (WRPG) (5.3).		
61	Assessment of water needs	The assurance statement provided reflects that there remain areas of uncertainty in the plan which will be updated for the final WRMP, including post covid-19 demand and lessons learnt from the 2022 drought.	Since publication of the draft WRMP, we have continued to review data on water demand and customer behaviour. This has informed a revised selection of water efficiency options; for example we have included flow regulators following research undertaken by South West Water, and we have partnered in research into effectiveness of combined delivery of energy and water saving advice. We have also updated our deployable output and demand modelling for the revised draft WRMP, and have tested the resilience of our plan to a 1: 500 year drought event from 2030 following advice from the EA that we should do so. We will continue to learn from the impacts of Covid-19 over the coming years; what we have learned to date is described in Section 3.3. Lessons learnt from the dry weather in 2022 will also be added to the final plan although it should be noted that Bristol Water was not in a	Section 3.3 and 3.7.1.
			drought during 2022; we were able to manage demand effectively within the	



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			resource we had available without any restrictions on our customers.	
62	Options to meet water needs	Bristol Water has considered a range of supply and demand options. Bristol Water's baseline supply demand balance falls into deficit in 2043, and rises over the subsequent years. Bristol Water has followed the standards of the guidance and identified a sufficient range of options up until 2050 to address water demand. The company has followed a twin track approach, invited third parties to contribute options and identified catchment based solutions that deliver water resources benefits defined as water available for use (WAFU). However, after decision making appraisal, only demand side options were selected as these were sufficient to close the supply demand balance.	Thank you for the comment. This is true for the dWRMP. Since the dWRMP, in response to consultation comments and to improve consistency with South West Water's plan / policies and the regional group, a number of changes have been made to the options. The plan will be re- optimised to ensure that final plan presents the best value solution for Bristol Water customers and the environment.	Changes will be made in the final plan, section 15.1.3.
63	Options to meet water needs	Bristol Water's dry year annual average supply demand deficit is 11.8 MI/d by 2050. To address this its feasible list proposes a total of 83 options (72 demand options and 11 supply options) from which preferred options are to be selected. The feasible options cover 9 types of demand option types, and 8 types of supply options. The total gained WAFU from feasible options would be 264.3 MI/d. In comparison to the deficit this is viewed as a suitable number and range of options to select best value options from.	Thank you for the comment.	N/A.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
65	Options to meet water needs	Option utilisation not been assessed based on review of options. Bristol Water focuses on demand management rather than new large water resources supply infrastructure.	Agreed and thank you for the comment. It is noted that the plan will be re- optimised in response to consultation comments and to improve consistency with plans of other regional companies and the regional plan itself.	Changes will be made in the final plan, section 15.1.3.
66	Decision making and prioritisation	Bristol Water's draft WRMP24 has not demonstrated how its best value company level plan has been informed by the West Country best value regional plan. For the final plan further detail to describe the regional methods and approaches should be added and the narrative should contain a complete and standalone explanation of decision making at the company level.	Unfortunately it was not possible to fully integrate the Regional Planning process with the WRMP due to the timing and process for completing these two programmes of work. We do not require any supply options for the Bristol Water plan, so options such as Cheddar 2 are not selected for the WRMP. If it is the case that this or similar options are required by other companies in the region, we will consider the benefits which could arise for Bristol Water in our WRMP29. For WRMP24 we have worked with Wessex Water to deliver an increased transfer of potable water via the established link between our networks near Bath.	N/A.
67	Decision making and prioritisation	Bristol Water should further demonstrate in its final plan that decision making has not been influenced by artificial constraints. This includes presenting the implications of sensitivity testing of different profiles of 1 in 500 year drought resilience, flexing the use of drought permits and orders, testing different glide paths on water efficiency and	The draft WRMP is driven by the Government-led targets to reduce demand and leakage. In their consultation response, the Environment Agency explicitly requires Bristol Water to achieve a 1 in 500 year level of resilience from the first year of the planning period, see ref. 15, whilst flexing the use of temporary use bans	Changes will be made in the final plan section 15.1.3.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		leakage, as well as use of temporary use bans (TUBs) and non-essential use bans (NEUBs).	(TUBs) and non-essential use bans (NEUBs) until 2039 (drought orders and permits are not feasible options due to their potential temporary environmental impacts) if needed. At the time of writing, our revision of the planning tables is not yet complete however, we do not expect to have to use TUBs or NEUBs in order to maintain a supply- demand balance surplus before 2039. Different glide paths for metering and leakage will be evaluated but they will all aim to achieve the required targets as specified in the relevant legislation. Bristol Water will select the best value plan for its customers within these	
68	Decision making and prioritisation	The company has considered the carbon impact (operational and embedded), natural capital and other benefits that the options can deliver. Identification and consideration of best value metrics have a line of sight to the plan objectives, however, it would further be beneficial to maintain a line of sight to sub-metrics and to the outcomes to structure and justify the preferred plan selected. In the best value analysis, the company has fully considered a wide range of economic, social and environmental benefits that the options can deliver.	legislative constraints. Sub-metrics (Flood risk, Multi-abstractor benefits, Climate change, Human health and socio-economics, Air Quality, Cultural heritage, Biodiversity, flora and fauna, Soil, geology, and land use, and, Landscape and visual amenity) are aggregated in the decision-making modelling into three, distinct, environmental metrics. These metrics, alongside carbon and economic impact and the benefits of a given option are used in the decision-making modelling to determine the best value option package.	Changes will be made in the final plan, section 15.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			Additional text will be added to the WRMP to draw out the costs/benefits of the selected options.	
69	Decision making and prioritisation	Bristol Water has not referred to Ofwat's public value principles, although the plan adheres to most of the principles. We would like Bristol Water to reference Ofwat's public value principles within their best value planning process in its final plan and provide narrative on how the principles have been used to inform preferred plan decision making. The plan provides an explanation of methods to combine individual scenarios and an explanation of the approach to uncertainty has been provided.	Each of Ofwat's public principles has been adhered to in the development of the BRL WRMP. For example, Principle 1 aligns to the sub-metric in Table 14-1 'Human health and socio-economics,' Principles 2 & 3 has been core to the comprehensive customer engagement and results processing undertaken during pre-consultation and consultation for the WRMP; it is also the case that a monitoring plan has been proposed for the environmental effects of the preferred plan as part of the SEA process (Environmental report, Appendix E Section 9.3). Principle 4 has been considered through our Willingness to Pay research which underlies the option characterisation in determining AISC. Principle 5 is demonstrated by our proposals to work with neighbouring companies, for example in providing a transfer to Wessex water and in developing the regional Plan. Principle 6 has been a core principle in that environmental to the development of the Plan.	Changes will be made in the final plan.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
			The final plan will describe how these principles have been addressed explicitly.	
70	Decision making and prioritisation	Bristol Water have provided an explanation of the approach to uncertainty and have tested the plan against the biggest areas of uncertainty. The costs and benefits of the least cost plan against the preferred and other alternative plans should be presented. Where investment is needed beyond least cost the value of the additional benefit needs to be presented within the WRMP planning tables with the robustness of this valuation data important for significant areas of investment. We expect to see this in the final WRMP.	See section 16.2 of the dWRMP text. The Least cost plan is presented against the best value plan supply-demand balance. Due to the supply demand surplus position at the beginning of the planning period in 2025, and the implementation of the leakage and PCC reduction targets, the assessments showed that there was very little difference between the least cost and the best value programme. The main difference is that under the least cost programme we would not bring in our smart metering option (HH_M_009(AMR) Metering and water efficiency customer education/ awareness) until 2030. In the best value plan, smart metering has been brought forward to 2025 to support the leakage strategy and help better understand the customer water use. This brings the cost of smart metering forward to AMP8, but better supports the delivery of increased meter penetration. A comparison of the costs of the two types of plan shall be included alongside	Section 16.2.
			the benefits in Section 16.2 of the final plan.	



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
71	Decision making and prioritisation	Bristol Water has a low baseline risk and has provided good justification for why it does not require an adaptive plan at this stage. Bristol Water tested the preferred plan against the Ofwat common reference scenarios (except technology) and showed the impact on supply demand balance. Some supply options are required post-2070 so an adaptive plan is still not required, however, Bristol Water noted it would monitor the need in the meantime. The company stated it will test against technology the common reference scenarios for final plan. In the final WRMP, to provide confidence in not requiring an adaptive plan at this stage, we expect to see Bristol Water testing the robustness of its demand management options, e.g. what would happen if it only achieved 50% of planned reductions.	See section 16.6 of the dWRMP text. The draft plan has been tested against a 'plausible worst case' scenario, which is represented by a future under which we experience the high climate change scenario, resulting in less water available in the environment, and we are unable to deliver the leakage and PCC reduction targets by 2050 (assume that 50% delivery of the target is achieved). This scenario results in us needing supply options by 2062 to meet an additional supply demand deficit of 28 Ml/d by 2080. Under this scenario, supply-side options would be required. An initial review of the most suitable options (considering yield, estimate costs and environmental impact) suggests that a combination of our existing catchment management programme, a new effluent reuse scheme and a new reservoir could eradict the deficit under this scenario. Section 16 will be expanded for the final plan to include the sensitivity testing against the technology common reference scenario and to demonstrate that a fully adaptive plan is not required at this time.	Section 16.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
72	Decision making and prioritisation	We expect to see a clear line of sight between long-term WRMPs and the requested investment at PR24. Bristol Water acknowledges that the PR24 business plan is a mechanism to set out investment needs in order to deliver the outcomes specified in its WRMP. The company states that this WRMP forms part of a larger planning framework including previous price reviews periods, drought plans and other strategic environmental plans including "Our routemap to Net Zero Carbon by 2030".	The WRMP will drive investment proposed in the PR24 business plan and the WRMP will be referenced from the Business Plan to illustrate line of sight. PR24 tables will be populated using data from the WRMP tables.	N/A.
73	Long term best value programme	Bristol Water are proposing a £127 million programme of enhancement expenditure investment for the 2025-30 period focused on demand reduction (water efficiency, leakage and metering). This is a significant increase on the £18 million supply demand balance enhancement expenditure programme the company requested for the 2020-25 period at PR19.16	As explained above for ref 45, we will provide further clarification following additional optioneering to demonstrate that the selected plan follows an optimal pathway in terms of leakage. We have also undertaken further work to develop our metering and water efficiency strategies following consultation comments around the technology and cost. However, it is inevitable that meeting the national policy targets on demand management will be challenging and expensive, especially when starting from a low baseline such as that of BRL.	Changes will be made in the final plan, Sections 12.7.1 and 15.1.3.
74	Long term best value programme	We are concerned that the unit costs for leakage reduction and demand-side improvements in the 2025-30 period are significantly higher than both the industry median and those presented by the company at PR19. Based on the data provided by the	See response ref. 45.	Sections 12.7.1 and 15.1.3



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		company a leakage reduction enhancement expenditure unit cost of 35.3 £m/Ml/d is calculated for the 2025-30. This represents the highest leakage reduction unit cost across all draft WRMPs and is significantly higher than the unit costs proposed at PR19.		
75	Long term best value programme	Reviewing enhancement costs across the 2025-50 period indicates that Bristol Water proposes to spend over £1 billion to deliver just over 10 MI/d of leakage reduction. We are concerned that the company's long-term reductions are reliant on options that are considerably higher cost than equivalent activities for other companies. The company should provide sufficient and convincing evidence that the preferred options being selected are best value in its final WRMP24 and ensure costs are reliable, efficient and appropriately allocated. The company should consider its proposed long-term strategy for leakage reductions if its proposed unit costs remain significant. Also, where metering costs are high compared to benefit, Bristol Water should outline efforts it will make to further reduce costs.	See response ref. 45.	Sections 12.7.1 and 15.1.3
76	Long term best value programme	For whole project life cost, the total cost on all preferred options is ~£921m, of this ~£611m is proposed to manage and reduce leakage levels. Other companies have presented significantly better value options to reduce leakage over the 2025-30 period. We expect Bristol Water to be clearer around	See response ref. 45.	Sections 12.7.1 and 15.1.3



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		confidence of costings provided and highlight assumptions made, techniques used and risks to costs provided, as well as indicating the level of market engagement which has been undertaken to develop bottom-up cost profiles for final plans.		
77	Long term best value programme	We request clarity around how carbon data has been compiled, whether this data is based on historic information, or driven by up-to-date estimate. We also request further clarity around whether the options list was finalised.	Bristol Water are updating the carbon values used for each demand and leakage option to be considered in optimisation. These values are based on unit carbon costs for activities and materials from available reference sources and are scaled appropriately with the level of activity indicated in the plan. This is described in the dWRMP in Section 13.1. The options will be subject to edits before the final WRMP and re-optimised in accordance with the various comments and requests made during the consultation process.	Section 13.1
78	Stakeholder engagement	Bristol Water has carried out a wide-ranging approach to customer participation and stakeholder engagement reflecting the significant challenges included in its draft plan. Bristol Water has used the challenge panel to develop the WRMP on behalf of the customers. This has allowed customers to stay informed during the development of the plan and given them opportunity to influence the process.	Thank you.	N/A.



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
79	Stakeholder engagement	However, there is limited evidence provided to give confidence that customers fully understand and support the approach on areas such as the need for investment and the proposed solutions. Bristol Water should provide further evidence demonstrating customer support has been sought on the proposed solutions in the final WRMP.	A survey was administrated internally by the Customer Research and Engagement Manager. It sought feedback on the draft Water Resources Management Plan (WRMP) during the public consultation period. The consultation was open for 12 weeks, from 28th November 2022 to 17th February 2023. A total of 121 respondents completed the survey. 112 respondents were from the Bristol Water Online Customer Panel. 93% of respondents felt that they understood the content; 90% support the leakage policy and 77% support the demand reduction policy although only 66% were prepared to reduce their own usage. There was high support (86%) for the development of new resource options in the West Country region. Around three- quarters of the respondents had a preference for a combination of supply and demand options. Section 2 of the dWRMP will be supplemented with more information on the outcomes and summary of customer support from the consultation process.	Section 2.
80	Assurance	A Board statement of assurance for the plan is provided, as well as a statement setting out how the Board will be involved in future iterations of the plan. No signatures are included on the Board statement. The plan	Future statements from the Board will include signatures.	Executive summary of final WRMP



Ref No.	Relates to	Comment	Bristol Water Responses	Changes made to the revised draft WRMP19
		states that a risk management framework is embedded into governance structures, and sets out lines of defence for assurance and decision making.		
81	Assurance	As identified above, the draft WRMP programme for 2025-30 represents a significant uplift in expenditure compared to the PR19 programme. For its final WRMP we expect the company to provide sufficient and convincing evidence that the Board has challenged and satisfied itself on the drivers of the WRMP, and that its WRMP and the expenditure proposals within them are deliverable in the context of the wider PR24 business plan proposals. The company should also demonstrate that it has put in place measures to ensure that the plans, of which the WRMP forms a key part, can be delivered.	New regulatory drivers mean that there is a significant uplift in expenditure compared to the PR19 programme. The Board has been and will continue to challenge the WRMP expenditure proposals within the wider context of PR24 business plan proposals to ensure that the WRMP is deliverable.	N/A.
82	Assurance	In the final plan, we expect to see evidence of assurance on Bristol Water's understanding and acceptance of the approach to licence capping. This is to ensure the risk and impact this imposes to Bristol Water is fully understood in the context of the largest drivers of future investment in the plan and the uncertainty that still surrounds this.	We have discussed the risk to DO on account of licence capping, i.e. reductions to licensed abstractions on account of WFD abstraction sustainability investigations, and have agreed a level of risk to scenario test for the final WRMP, see ref. 1 for more information. This will illustrate the risk to the company's ability to supply water from sustainability reductions, and this assessment will be reviewed as investigations are completed.	N/A.



Table 4: Comments from other organisations

Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes
					made to the
	A			71 1	rdWRMP19
83	Arqıva		We welcome Bristol Water's identification of reducing water	Thank you.	N/A.
			demand as its first priority, and its ambitions to "go even		
			further in reducing leakage and support customers to find		
			and fix any leaks on their pipes" as well as to "help customers		
			to use water mindfully". Action to reduce demand will		
			improve the resiliency of public water supplies, reduce the		
			amount of energy required to treat drinking water, and help		
			customers realise savings on their household bills		i
84	Arqıva		We believe that Bristol Water must build in a greater role for	See response ref. 13 and 45.	Sections
			AMI from AMP8 within its water resource management plan.		12.7.1 and
			AMI provides water companies with hourly data on the		15.1.3 and 16.
			amount of water delivered to a property, 24 hours a day, 7		
			days a week, with data transmitted securely from water		
			meters to water		
			company data centres. This level of insight enables water		
			companies to deliver a range of benefits. Companies that do		
			not deliver AMI risk delays to delivering these benefits, or not		
			realising them at all.		
			• AMI enables companies to detect more leaks		
			across their network and respond quickly		
			• AMI helps empower consumers to reduce per		
			capita consumption and household bills		
			AMI could prevent 1 billion litres of water a day		
			from being wasted by the mid-2030s, lowering		
			carbon emissions		
			Aivil delivers wider economic benefits through		
			Improving operational efficiency		
			ine importance of government and regulatory support to		
			UNIOCKING THE DENETITS OF SMART METERING. AS THE REGULATOR,		
			Utwat has a critical role to play in enabling the delivery of		



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			AMI through its settlements for the next regulated price period. It is important that Ofwat encourages water companies to put forward ambitious smart water metering proposals and enables investment in advanced metering technology. This should include the rollout of new AMI meters and replacement of old, less advanced meters.		
85	Arqiva		Arqiva is ready to partner with companies to deliver smart metering's benefits. We are the UK's only large-scale provider of gold-standard smart water meter infrastructure, having installed over 1.9 million advanced smart meters to date for customers including Thames Water and Anglian Water.	Thank you.	N/A.
86	Canal and River Trust		The Trust welcomes the focus Bristol Water places on the importance of the R01 transfer in the resilience of their plan. We will continue to work closely with Bristol Water on the assessment of the resilience of the source water to help inform their final WRMP24.	Thank you. Following our recent discussion (11th May 2023) it seems that it will not be possible to include your work on the R01 into WRMP24 however, we too are keen to work closely to ensure the resilience of this source and that the latest information informs our planning cycles at both the company and regional level. rdWRMP text altered in Section 5.2.3.	Section 5.2.3.
87	Canal and River Trust		Bristol Water have determined that future supply demands in their dWRMP24 can be achieved by implementing their preferred demand management strategy alone and recognise that this carries risk that is not entirely in their control. Therefore, it is understood that Bristol Water will continue to develop adaptive plans and work with the West Country regional group to explore potential future, alternative supply options, and these will be updated in their final WRMP24.	The WRMP we have developed has not undertaken a formal adaptive planning approach whereby multiple preferred programmes or options are considered and decision points identified. The reasons for this are discussed in Section 14.4 of the dWRMP. We have, however tested our plan via scenario assessment to understand the likely effects of the biggest uncertainties that could	N/A



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
				influence the plan. In doing this we have aligned the scenarios assessed with those set out in the Environment Agency WRPG and the Ofwat common reference scenarios.	
				We will also continue to work with our West Country Water Resources Group partners to develop a regional plan to help ensure the sustainable supply of water across the region; reducing risk to our own supplies where it is evaluated to be sensible to do so and in line with current guidelines. WRMP24 will reflect the latest understanding of the regional plan from Bristol Water's perspective	
88	Canal and River Trust		According to the data produced in Bristol Water Draft WRMP24 data tables, the Dry Year Annual Average deployable output is approximately 73% of the Annual licensed quantity. This suggests that there maybe opportunity to mitigate, or delay, the need to develop new, alternative supply options by optimising existing sources. We would recommend that Bristol Water consider this alongside their other options when updating their final plan.	There are a number of reasons why sources are constrained below the annual licensed quantity. These include constraints arising from limited demand local to that source, for example at Clevedon, as well as constraints arising from treatment infrastructure such as at Purton. We are working to mitigate these constraints where feasible. We have included in our WRMP supply options, Option P01-01 which would focus on increasing performance of existing sources towards licence maxima.	N/A
89	Customer		Management of Water Resources. The Plan contains no proactive proposals to benefit water resources at times when flooding is predicted. Surely	The option development process did consider the development of an impounding reservoir which would help	N/A



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the
					rdWRMP19
			opportunities should be taken when river levels approach their maximum to significantly increase abstraction rates and put in infrastructure to divert this into reservoirs; plus any other residential areas where flooding is damaging. Having worked as a business continuity manager, I would be storing excess water to address the demand during the next drought. The BW drought plan simply prioritises different customer sectors as supply/service is cut systematically during a drought with no thought of proactively filling reservoirs to be able to maintain service to all customer sectors.	to provide flood resilience to Bristol city. The option was not taken forward due to the potential for unfavourable impacts on the transitional and coastal waterbodies local to the site that may occur as a result. Bristol Water has committed to the targets for leakage and customer water use set by Government. Analysis shows that we can meet demand using demand management options which are inherently more sustainable than supply side options. We did include among our supply options a new reservoir (R005; although this will be removed for the final plan due to overlap with regional planning), and further supply options are being considered for the Regional Plan. The WRMP and the Drought Plan are linked documents - the Drought Plan is an emergency response plan, while the WRMP is predicated on providing resilience to drought, in this case, that which has a return period of 1 in 500	
90	Customer		Raw Sewage Discharges	Bristol Water does not provide sewerage	N/A.
			There is much in the press about the angst over raw sewage	services and therefore does not	
			affecting beaches, marine life and rivers. The WRMP does not	discharge sewerage. However, we are	
			even mention the word Sewage once. Wessex Water have at	working with Wessex Water to identify	
			least stated their intention to reduce raw sewage discharges,	and mitigate where sewerage discharges	



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			although with initial emphasis on monitoring every overflow, and later new storm tanks. BW WRMP emphasises care for the environment, citing this as wildlife and rivers – but no mention of coast or marine environmental degradation we currently observe. The WRMP should at least state this as an objective, even if caveated by concerns over capital costs and increases in customer bills to prevent all sewage discharges.	impact water quality in our raw water sources, and we also propose to reduce per capita consumption which will help to reduce sewage volumes.	
91	CCW		Bristol Water's modelling shows no deficit of water supply until 2038 and, positively, in the recent heatwave of 2022, its supply was resilient. The issues arise around 2038 and we are not convinced that Bristol Water's proposals are sufficient to drive the required water savings now to prevent the deficit after 2038.	See response ref. 13.	N/A.
92	CCW		The preferred Plan is demand-side focussed only, when we know that Bristol is actually developing supply-side options under RAPID. We would like to see in Bristol's Plan how the supply-side options it is developing impact water availability.	Cheddar 2 is an SRO being developed under RAPID to serve the needs for the other water companies within the region and to improve the resilience of the region as a whole. The final plan shall reflect this position, Cheddar 2 will be removed from the Bristol Water options list in accordance with the WRPG. Once demand targets have been met, there is no supply-demand deficit in Bristol Water's plan. Therefore, the company does not currently have a need to develop supply options further for	Section 12.7.4
02	COM		We would like to see more innovation in Dristel Water's	purely its own use.	NI/A
22	CCVV		approaches to leakage and PCC reduction. There is a lack of detail about how issues will be tackled.	of innovative policies such as DMA subdivision which has helped achieve the	IN/ A.



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				current industry leading levels of	
				leakage. BRL will continue to explore	
				innovative options and look to adopt	
				best practices from across the industry	
				when it emerges and has proven delivery	
				of appropriate cost benefits. For	
				example, leakage options have been	
				developed for the implementation of	
				acoustic logging across the network and	
				the installation of fast logging pressure	
				monitors to assist with leak detection	
				and the development of live hydraulic	
				models. More speculative innovation	
				policies have also been modelled to	
				consider the investment in joint	
				innovation funds to drive innovation and	
				cost efficiencies in both pipe repair and	
				replacement techniques in the future.	
				BRL is implementing a process to review	
				both cost and benefit assumptions	
				previously made on a number of demand	
				options based on additional data and	
				information made available since the	
				initial draft submission. In particular, the	
				success rates from collaborative	
				efficiency home audits in conjunction	
				with AMI metering, and the smart	
				metering options available.	
94	CCW		We would like Bristol Water to show ambition to move	See responses ref. 13. 16 and 45.	Sections 12.
	_		beyond Government targets and lead on these issues, at the		15. and 16
			same time freeing up more resources for the wider South		-,



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			West region. If more ambition isn't feasible, we would like to see the cost impacts and research to support this decision.		
95	CCW		Bristol Water is already a strong performer against leakage targets and we support the company's continued work in reducing leaks, both on its assets and on customer pipes, across its network. The target to reduce leaks by a further 30% will meet the Government's target of 50% reduction by 2050. We would like to see more detail about how it will continue to innovate in this area.	See response ref. 45 and 93.	Section 12.7.1 and 15.1.3
96	CCW		Bristol Water has been less successful in reducing per capita consumption (PCC), albeit Covid and homeworking has had an impact on this. This dWRMP relies on a substantial PCC reduction, achieved in the main through a combination of smart metering, behavioural change and a mix of government interventions (such as water labelling, changes in WC standards and retrofitting grey water and rain water systems in homes). As with leakage, Bristol Water's target is set in line with Government requirements. We felt that the document cited the required changes but lacked detail on how they might be achieved.	See response ref. 13 and 16.	Sections 12, 15, and 16
97	CCW		In both leakage and PCC reduction, Bristol Water appears to be continuing with work it has already begun. We would like to see more innovation and ambition beyond the required targets. We are concerned that over reliance on Government initiatives could see the people of the Bristol running dry.	See response ref. 45 and 93.	Section 12.7.1 and 15.1.3
98	CCW		We are concerned that all of the plan, as presented, is focussed on demand management. The supply-side actions that Bristol Water is taking are set out in the documents and consultations as things to be considered at a later date, when actually, plans such as Cheddar 2 are being developed and progressed through RAPID. We would like to see refreshed	See response to ref. 4 Following recent discussions with CRT (11th May 2023), unfortunately, it will not be possible to include their work in WRMP24. This is due to the mismatch	Section 12.7.4



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			research into customer support of this project (last undertaken in AMP5), as well as the continuing investigations into operational feasibility and usefulness of resource across the region. With some of Bristol Water's supply coming from R01, and with a level of refinement ongoing over the potential impact on yield of a drought order and different flow conditions, we would expect the plan to set out the actions that may be taken on the supply-side under the potential different outcomes that assessment could give. We are pleased that the intention is to include this in the final WRMP24. We would like to see this more clearly explained, in both the technical and non-technical documents as long-term dependency on an out of region supply feels at odds with looking at new resources to become more self-sufficient.	between the programmes of work. We are however, committed to working closely with CRT to better understand the risks associated with this source and to ensure the resilience of supplies across our area and the wider region, working with all partners and stakeholders.	
99	CCW		Overall, we would like to see the plan show a better balance of demand- and supply-side actions.	For the draft WRMP, solely focussing on demand management options was the best value for customers that could be achieved, given the Government-led targets for PCC and leakage. It is anticipated that the final WRMP24 will follow the same focus on demand-led measures albeit, some of the details and costs will have changed in response to the consultation and acquisition by South West Water. Bristol Water will continue to work closely with regional partners on the development of SROs to ensure the sustainability of water resources in the region. Bristol Water has not ruled out the development of supply-side options	N/A



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				in the future in its WRMPs. Such options would be subject to evaluation in accordance with relevant legislation at the time.	
100	CCW		The dWRMP explains that Bristol Water has engaged with its customers, including the Youth Board and other stakeholders, to understand their differing priorities (for example between household customers and non-household customers). We are pleased that Bristol Water has undertaken this level of engagement and built its plans with customer priorities in mind. However, we feel that more could be done to explain to customers why the options being proposed in the plan are being taken and what the options selected mean for them, particularly within the Non-Technical summary. We have some questions over the content of the plan itself. We have documented these thoughts within the responses to the questions asked as part of the consultation below.	Noted. We shall respond to these comments individually in the subsequent responses.	N/A.
101	CCW		The dWRMP makes absolutely clear Bristol Water's ambitions to meet government targets on leakage and PCC reduction by 2050, but it is less specific about the targets in place for reduction in non-household water use. Government's 2050 target is a 15% reduction in nonhousehold water use, with an interim target of a 9% reduction by 31 March 2038 (specified in Defra's Environmental Improvement Plan). We would like to see acknowledgement of this target made specifically in the plan, linked to the NHH water saving measures, such as efficiency visits and smart metering, already detailed.	See response to ref. 16.	Section 12 and 15.
102	CCW		The non-household retail market has so far failed to deliver a market for water efficiency assistance for business customers in England to the extent that was envisioned when the non-	Bristol Water recognises the significant challenge in supporting NHH customers to reduce demand in order to meet the	N/A.



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			household retail market opened for all businesses in 2017. While the introduction of a new business demand Performance Commitment by Ofwat in the PR24 final methodology means there will be greater transparency and an opportunity set challenging targets, this is not a regulatory measure that can deliver demand reduction by itself. We would like to see greater innovation and ambition in demand management, with Bristol Water showing how it will engage with not only business customers but also retailers on joined up strategies to help reduce demand. There is scant mention of this in the current dWRMP.	prescribed Government targets. As concluded by the Retailer Wholesaler Group, Water Efficiency Subgroup in 2022 (https://mosl.co.uk/documentdl/5626- options-for-promoting-water-efficiency- in-the-non-household-market- recommendations-from-the-retailer- wholesaler-group-water-efficiency- subgroup), we acknowledge that it is necessary for wholesalers and retailers to find ways of working together. We collectively need to find a balance that gives retailers access to water efficiency funding and opportunities to support their customers to foster growth in this area, and reward those already delivering, but does not prevent wholesalers meeting their water efficiency performance commitments. Additionally we support the view within this report that retailers must work with wholesalers in the delivery of water efficiency, but must not be allowed to act as a barrier to the delivery of the underlying requirements. Our view is that smart metering is critical to helping NHH customers understand their water efficiency, to assess the impact of interventions and to monitor progress. Hence, this will be a significant	



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				focus for us for supporting a reduction on NHH demand over the coming years.	
103	CCW		Did you understand the content of our dWRMP? If not, please detail in the next box what areas would you like clarifying. The dWRMP is clear and readable and we particularly liked the use of graphics and easy to read text in the non-technical document. The non-technical document in particular tells customers they need to save water, suggesting actions such as using rainwater for the garden or car washing, and that Bristol Water will support them. The detail of this is lacking. Perhaps Bristol Water could link to its further information on water saving, or expand on its community competitions and outreach ideas? Ideas such as the community competition (HH_I_004) are not expanded on in the technical document, making comment on these ideas impossible. We recognise that Bristol Water has offered opportunity to directly ask questions about its dWRMP plan through the engagement sessions in January 2023, but would like to see more detail in the final WRMP24.	We appreciate the comments made here and will look to revise the WRMP text and summary document appropriately. In particular, further details and clarification will be provided on those options taken forward to the plan.	Changes will be made in the final plan, section 15.3.1.
			detail they knew where to look. This could help readers to more accurately answer questions in the consultation.		
104	CCW		Do you think there might be something missing from our dWRMP that we need to consider? We would like to see more innovation around plans to reduce PCC. The actions proposed for AMP8 sound incredibly similar to those in AMP7 (p117 onwards). Continuing to do mostly	See response ref. 93.	N/A.



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			the same actions might not lead to the reduction in AMP8 that Bristol Water's plan relies on. Bristol Water has been successful in reducing leakage, and we'd like to see ambition to remain at the forefront through continued innovation.		
105	CCW		Are there any particular risks or opportunities which we should consider in our plan? Bristol Water is in the position of having a sufficient long term supply/demand balance, as long as its demand management plans are successful. However, to better support the region, we would like to see Bristol Water continuing to actively investigate potential supply side options. Lowering its dependence on supply from the R01 could free supply for a different company or region. The dWRMP does not explore the supply-side opportunities in detail, instead relying on demand-side reduction explaining that if it does not deliver the reductions hoped for supply-side measures will be developed.	Note response to ref. 4. Thirty-four supply-side options were considered in the unconstrained list for the dWRMP. Of these, 11 supply-side options were scoped in more detail. The plan must aim to achieve the targets for demand reduction in households and non-households and leakage reduction. Once options to achieve these targets were determined, no supply-demand balance deficit remains in the plan. Therefore, supply-side options are not necessary. However, the plan does consider scenarios that are more severe than the current estimate of supply- demand balance deficit. Under these scenarios, supply-side options may be required. The planning cycle allows us to focus efforts in an efficient manner and to respond to changes in our system as they arise. The development of supply-side options for which there is no need would be an inappropriate use of customer money at this stage, and would cause unnecessary impacts on the environment.	Section 12.7.4



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				However, our plan should be seen in context of the wider region to which we belong. Whilst there is no current need from BRL customers for supply-side options, that does not mean that BRL will have no involvement in the supply options being developed for the resilience of the region. Where new supply options may be able to sufficiently benefit BRL customers directly in the future, these options will be considered carefully.	
106	CCW		Do you think our planned levels of service should better reflect our actual levels of service? Yes. Bristol Water has exceeded the current 1 in 15 year target by some way, so to set a more stretching target would show an ambition to maintain this performance.	Customer and consultee responses on whether Bristol Water should change the Levels of Service (LoS) to better reflect the actual LoS was mixed. In addition, Bristol Water is currently undertaking a complete review of its reservoir control curves (and implicitly within this, LoS). Rather than change the LoS at this late stage for WRMP24, we will carefully consider our LoS commitments as part of the reservoir control work. The WRPG allows companies to flex the use of TUBs and NEUBs, as options, in order to achieve 1 in 500 year resilience early in the planning period (to 2039). Based upon the dWRMP, it is unlikely that Bristol Water will need to do this.	N/A.



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107	CCW		Do you support this leakage reduction policy? Yes, we support the aim to reduce leakage by a further 30% by 2050, albeit we would like to see Bristol Water showing more ambition (see Q2). We support Bristol Water's customer leakage assistance policy. As Bristol Water is already a strong performer in this measure, we would like to see Bristol Water considering if there is scope for it to be more ambitious in these targets, exceeding Government requirements by 2050.	As Bristol Water is already at the forefront of leakage management in the UK water industry, we plan to take an "intelligent pathway" to deliver an incremental reduction in leakage across the planning period, balancing deliverability, affordability and intergeneration fairness. Our current low level of leakage means that increased mains replacement, beyond our long term maintenance needs, will be required. Given the relatively high costs of such activities, we consider it would be inappropriate to be significantly more ambitious. However, for the final draft of the WRMP we are carrying out a review of the potential approach and costs associated with increasing our ambition to achieving 50% leakage reduction sooner than 2050.	Section 12.7.1
108	CCW		Customer water use a. Do you support this demand reduction policy? We support the intention to encourage customers to use water wisely, and raising awareness of the value of this important resource. Given the scale of demand reduction required we are not convinced the company's approach will deliver the step change in household and non-household water use that is needed.	See response ref. 13 and 16.	N/A.
109	CCW		Would you be prepared to reduce your water consumption in order to support the delivery of this target?	See response ref. 13 and 16.	Changes will be made in



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the
			The lack of detail in the dWRMP, especially the non-technical version, may lead people to answer this question with a yes, but uncertain of the actions they can take, and what actions you can help them with, in achieving this. The technical version of the document commits to home efficiency visits (HH_A_001), detailed as "targeted water efficiency audits" to be implemented from 2030. We are pleased that these will also be offered to NHH customers. However, we would like to see the action before 2030 and understand the targeting approach. We notice Bristol Water plans to continue its school education programme and support this as a great way to help children and their families understand and value water, increasing the likelihood that they will want to reduce consumption. It was not immediately clear from the document why the school visits are scheduled from 2036, when they are already happening. Subsequently, in the stakeholder meeting, it was explained that they visits have been paused and will be refreshed and relaunched. We would love to see this sooner than 2036. We are pleased to see Bristol Water recognising the needs of its NHH customers within its water reduction plans, with SMART online tools. We will be interested to see how Bristol Water works with NHH customers and retailers to ensure the tool is usable and drives the right water awareness and water saving behaviours. As the smart metering roll out is planned over 15 years, we would like to see how Bristol Water will prioritise and target NHH customers – perhaps starting with long unread / unlocatable meters, then highest users? The dWRMP says there will be a "highly targeted approach" to	The timing of options to achieve Government-led demand targets was determined using an objective optimisation tool and subsequent review from the company working group for the draft WRMP with the intention of creating a programme of work that was both affordable, aligned to company policies and would achieve the targets of the plan. The company shall undertake the same process for the update of the draft WRMP and shall consider the timing of the newly selected options carefully.	the final plan, section 15.1.3.



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			AMI type meters across NHH, we would be interested in more clarity around this targeted approach. In households, we will be interested to see the results of whether domestic customers would be willing to pay more for an AMI type meter for the benefit of additional information over AMR type meters. The dWRMP assumes further reductions in water usage by moving already metered customers from dumb to AMR/AMI meters. We believe that how the information from any smart meters is made available to customers will be pivotal in how useful and useable it really is, and how that will impact on water usage.		
110	CCW		Demand and supply options a. Do you agree with this approach? Bristol Water has focussed on demand-side options with an acknowledgement that its success is somewhat dependant on factors out of Bristol Water's control and so it will keep the progress under review. If these options do not deliver the assumed benefits, Bristol Water will look at supply-side options. As Bristol Water is developing supply-side options already, we would expect to see this made clearer in the WRMP, along with any additional cost (above the £15 per year by 2030 quoted) so customers can understand the potential impacts. The cost of developing supply-side options might help to encourage people to see the benefits of using less water and therefore be an incentive to make the demand-side options work.	There are no supply-side options selected in the dWRMP as demand-side options were sufficient to close the any future supply-demand balance deficit using the knowledge and information currently available. It is anticipated that this will remain the case for the final WRMP24 although the finer details of the options are being revised in line with the responses to the consultation process. The demand-side options are required in order to meet the Government-led targets for household demand, non-household demand and leakage reduction. Therefore, the cost of any supply-side options introduced would be in addition to the cost of the demand-side options. Using current methodologies this would not provide	N/A



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				the best value plan for customers and the environment. Any supply-side options currently in development from the Regional Planning process are of interest to BRL from the perspective of the wider resilience of the region. Where such options may be used in the future to improve the resilience of supplies for BRL customers, these shall be considered carefully.	
111	CCW		What do you think about the balance of demand management over new resource options? As above, we would like to see Bristol Water provide more balance by explaining the supply-side options it is currently developing.	See responses to ref. 4 and 110.	N/A.
112	CCW		Would you prefer a strategy that included supply options (treatment works upgrades, reintroduction of small water sources, and/or a new reservoir at Cheddar) as well as demand options within the WRMP to 2050? Yes. As above.	See responses to ref. 4 and 110.	N/A.
113	CCW		Regional planning a. Would you support the development of these resource options within the Bristol Water supply area? We support Bristol Water continuing to develop the ideas at this stage but would need to see more customer and stakeholder research and engagement over the proposals, along with the cost and options appraisal and before agreeing that we support them going ahead	Noted – thank you for the response.	N/A.
114	CCW		b. Do you support the idea of developing supply options, such as a second Cheddar Reservoir, at a strategic regional level to	Thank you.	N/A.



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			improve water supply resilience for the West Country as a whole? Yes, we support companies working together, both at a regional and national level, to ensure England and Wales has secure and reliable water supplies now and into the future.		
115	CCW		Environmental destination: Do you support our focus in these areas? Yes, the areas identified seem sensible and comprehensive choices. We know this is an important priority for people, and are pleased to see that the company has recognised the need to continue to work with its customers and communities to understand the important part they can play.	Noted – thank you for the response.	N/A.
116	Historic England		We note, and welcome, the primary focus of the Plan on demand reduction, and consequently that you consider any potential historic environment impacts can be dealt with through appropriate mitigation and construction good practice. However, if new or replacement infrastructure, or changes to the water environment are proposed – as implied they may be - then Historic England would welcome further involvement to appreciate and help advise, where you feel this might help, on the management of the potential implications. We assume you are also in liaison with the County's Archaeological Service (Somerset Heritage Trust) who will be able to provide a local and experienced perspective	Comments noted and we thank Historic England for its positive feedback. We will consult with Historic England if any of our works are likely to affect the historic environment.	N/A.
117	Historic England		We note that the Strategic Environmental Assessment (A3.8.1) recognises that the management of water resources can have direct and indirect impacts on the Historic Environment, which can be both positively and negatively affected by water demand and supply options, including catchment and abstractions, changes to water levels and quality. The SEA also acknowledges that these impacts can be	Comments noted and we thank Historic England for its positive feedback.	N/A.



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			particularly challenging for heritage assets of archaeological interest, especially where there are as yet unrecorded paleoenvironmental and/or palaeoecological remains. These are often deeply buried within the sequence of 'natural' deposits and are potentially waterlogged. Such archaeological deposits may potentially be of national significance, such as the wetland areas and mires in the Somerset Levels.		
118	Historic England		Finally, as the Plan area is within proximity to Bath it will be important to consider the potential impact of proposals on the spring catchments of the City of Bath World Heritage Site and the Great Spa Towns of Europe World Heritage Site, mindful of The County of Avon Act (1982).	Noted – the Environmental Baseline (Appendix 3) has been expanded to provide trans-boundary sections whereby Bath WHS is described.	Appendix 3
119	Mendip Hills AONB Partnership		On behalf of the AONB Partnership, we support Bristol Water's WRMP Environmental Destination commitments and are keen to work with you in the Mendip Hills AONB to help achieve these commitments. Funding and support from Bristol Water to work with land managers to improve the quality of water, and natural flood management opportunities at the top of the catchment on Mendip, as well as improving connectivity for wildlife and the condition of SSSI reservoirs in the AONB, are in line with the AONB Management Plan (2019-2024), and the emerging AONB Nature Recovery Plan. For example, we would encourage projects that restored water quality and riverine habitat and their associated floodplain wetlands and rhynes, as well as creating new habitat, in the Winscombe Vale (Lox Yeo River), around Blagdon Lake, Chew Valley Lake (Congresbury Yeo and Upper Chew catchment), and the Cam Brook, linking to the wider countryside along identified nature recovery networks.	Comment noted and we thank Mendip Hills AONB Partnership for its positive feedback.	N/A.



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120	Mendip Hills AONB Partnership		We consider that the Mendip Lakes Partnership, led by Bristol Water, should be strengthened and better resourced as a way to achieve this in partnership with other organisations including local authorities and Bristol Avon Rivers Trust. We request that we are kept informed of any plans to increase supply that might involve infrastructure projects within the AONB, and within the setting of, the Mendip Hills AONB. Quarries can be important brown-field sites for many species including rare invertebrates, and whilst a second Cheddar Reservoir may present opportunities for beneficial recreation and habitat for water birds, such development may significantly impact upon the special qualities of the AONB including views out across the Somerset Moors and Levels to the Severn Estuary. In addition, such development has the potential to significantly impact upon important wetland habitat and threatened species such as water vole. We would also expect a substantial mitigation package to be put in place for the AONB and local communities impacted by any works including connective infrastructure projects.	We will continue to work with farmers and other organisations including the AONB to improve water quality in the Mendip Reservoirs by focusing on diffuse pollution. We have also put together a comprehensive set of environmental improvement projects for our PR24 WINEP which will investigate combined effects of climate change and population growth on our SSSIs, and downstream habitats. In the context of the regional options, environmental impact assessment and mitigation will be fundamental to their development and AONB will be consulted.	N/A.
121	Mendip Hills AONB Partnership		Whilst we note that there is little mention of contribution of the Mendip Hills AONB limestone aquifers, which are a special quality of the AONB designation in the draft plan and the background reports, for example; page 24 of Appendix E: Strategic Environmental Assessment, Ricardo Environmental report states; '4.4 OVERVIEW The Bristol Water service area contains a population of approximately 1.23 million people, centred around the city of Bristol. Deprivation levels within the Bristol Water supply area are relatively low compared to England as a whole. Bristol Water supplies nearly 276 million litres of drinking water to	Thank you for this comment. The SEA Environmental Report (Section 4.4 and Appendix 3) and WRMP has been updated to better reflect the contribution and special quality of the Mendip Hills AONB limestone aquifers and national important designated landscapes.	SEA Environmental Report (Section 4.4 and Appendix 3)



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			its customers every single day. The area contains many sites important to wildlife, including many nationally and internationally designated sites, the largest being the Severn Estuary. The area also contains many areas protected for their landscape quality, including the Cotswolds, the Mendips and the North Wessex Downs.'		
			In addition, we are disappointed that no connection to the limestone aquifers of the AONB are made in the Draft Plan, for example; page 7 'Our supply area' (Draft Water Resources Management Plan 2025-2080 Customer summary). We request due acknowledgement is given to the national important designated landscapes of the Cotswold National Landscape, the Mendip Hills Area of Outstanding Natural Beauty (AONB) and the North Wessex Downs AONB in the documentation.		
122	MOSL		Ensuring references to 'customers' are clear, in terms of whether you are referring to households ,NHHs or all customers.	Thank you for this comment, we will make amendments to the text of the WRMP where appropriate to provide clarification on whether options are focused on household or non-household customers.	Throughout but particularly Sections 6, 12 and 15
123	MOSL		A clear statement regarding the recognition of the size and importance of the NHH market and the role it plays in delivering your WRMP, reducing water demand and wastage.	See response ref. 16.	N/A.
124	MOSL		Reference to Defra's nine per cent water reduction target for the NHH market by 2038 and your detailed plans for achieving this target.	See response ref. 16.	N/A.
125	MOSL		Greater use of the research by MOSL and the Metering Committee to determine the business case for NHH smart metering and the benefits of making meter data available to retailers and customers.	See response ref, 16.	N/A.



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126	MOSL		Clarity on the number of smart meters you intend to deploy in AMP8 and beyond – visibility for retailers on when they will be rolled out and where will help avoid duplication of effort.	Details of meter numbers are provided in the submission tables, we will look to extract relevant high level summaries in the WRMP.	WRP Tables
127	MOSL		Where appropriate, cross-referencing the findings of other water companies smart meter rollouts to support smart meter proposals and the scale of water saving opportunities.	See response ref. 13.	N/A.
128	MOSL		An approach that treats smallest NHH customers the same as households for the purposes of water conservation messages and devices.	The approach that we have taken to the NHH demand options is a company wide view that all demand options are available to all NHHs, and that benefits will be gained with specific groups of NHHs (types of businesses, e.g. farms). As such, the delivery of these options are where an approach could be taken to treat small NHHs more akin to HHs. Options that specifically target NHHs that could be treated as small NHHs exist within the feasible list and have been considered for optimisation.	N/A.
129	MOSL		Explanation of how water efficiency services would be offered to different categories of NHH customers – multi-site, industrial customers, commercial/offices etc.	At the time of writing, the optimisation of non-household demand options for the next draft of the WRMP is not complete. However, the available options can be split into four broad categories: 1) smart metering, 2) Business Efficiency Visits, 3) Tariffs and incentives, and 4) Rainwater harvesting. Within each category, the required water efficiency devices and behavioural changes may be different and specific to that users needs. It is anticipated that	Changes will be made in the final plan, section 15.


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				smart metering will be key to understanding a businesses' true water use. It can be expected that smaller diameter meter upgrades are likely to be undertaken first as more is known about such upgrades. Engagement through business efficiency visits will also be really important in delivering a number of the options, and such this will make up a part of a larger programme of engagement. The company hopes to improve its understand of how potable water use can be reduced by developing non-potable options with those businesses that can make use of such a	
130	MOSL		Explanation of how you plan to work with retailers collaboratively to engage with customers to reduce water consumption and carry out water efficiency interventions.	Bristol Water recognises the significant challenge in supporting NHH customers to reduce demand in order to meet the prescribed Government targets. As concluded by the Retailer Wholesaler Group, Water Efficiency Subgroup in 2022 (https://mosl.co.uk/documentdl/5626- options-for-promoting-water-efficiency- in-the-non-household-market- recommendations-from-the-retailer- wholesaler-group-water-efficiency- subgroup), we acknowledge that it is necessary for wholesalers and retailers to find ways of working together. We collectively need to find a balance that	N/A.



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				gives retailers access to water efficiency funding and opportunities to support their customers to foster growth in this area, and reward those already delivering, but does not prevent wholesalers meeting their water efficiency performance commitments. Additionally we support the view within this report that retailers must work with wholesalers in the delivery of water efficiency, but must not be allowed to act as a barrier to the delivery of the underlying requirements. Our view is that smart metering is critical to helping NHH customers understand their water efficiency, to assess the impact of interventions and to monitor progress. Hence, this will be a significant focus for us for supporting a reduction on NHH demand over the coming years	
131	MOSL		Exploration of how you plan to work with retailers to avoid denial of PR24 outperformance payments – e.g., a pain/gain sharing mechanism or incentives for retailer water efficiency offerings.	See response to ref. 130.	N/A.
132	MOSL		A country-wide approach to demand reduction, regardless of whether water company regions are designated as being 'water stressed' or not, recognising all areas have local demand challenges.	We recognise the efforts being made at national level and will continue to explore innovative options and look to adopt best practices from across the industry when they emerge and have proven delivery of appropriate cost benefits.	N/A.



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133	National Trust		The Trust supports spatial planning and environmental management that takes a holistic and plan-led approach. This includes planning for the long-term, looking at the landscape or catchment scale, and considering the implications for climate change, landscape, heritage and nature.	Thank you.	N/A.
134	National Trust		 The Trust expects that the final WRMP would incorporate: An environmentally responsible and sustainable approach to development, with clear SMART aims and objectives; The use of the mitigation hierarchy in all aspects of planning and programming – e.g. leakages of water resources to be addressed prior to new development of assets; The development of strategic/regional level drought resilience measures in parallel with the new infrastructure programme; A clear communication and education strategy on management of demand; A commitment to full and effective engagement and communication with all stakeholders that may be affected. 	We have created a best value plan to ensure an environmentally sustainable water supply is provided in the Bristol Water area both for the immediate future and the long term. This plan is predicated on the need to meet government policy targets of a further 50% reduction in leakage by 2050 and to reduce PCC by around 25% to 110 litres per person per day by 2050. Our demand reduction actions include plans for customer engagement, both with households, non-household and schools. The dWRMP process indicated that no supply options would be required at the present time.	N/A.
				Bristol Water is working closely with the other companies within the West Country Water Resource Group to help ensure that the different company plans and regional level plan are aligned. The RAPID gated process contributes to additional environmental scrutiny of WCWR Group strategic solutions.	



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135	National Trust		When the National Trust acquires land or buildings that it considers to be of outstanding quality, the National Trust Acts provide our trustees with the unique ability to declare that land as "inalienable". This means that the land cannot be sold or mortgaged, rather it must remain in the care of the Trust, in perpetuity. Once declared inalienable, this designation cannot be reversed. It is one way in which the Trust delivers its charitable purpose. Any National Trust land declared as inalienable benefits from enhanced protection from compulsory acquisition. Such land cannot be the subject of compulsory acquisition against the Trust's wishes, without going through a special parliamentary procedure. We would recommend that any developer of water resource assets which may affect National Trust land should discuss their proposals with the Trust at an early stage.	Noted. Cheddar 2 is being considered as part of the regional planning process and whilst Bristol Water will aim to appropriately reflect such planning within its WRMP where relevant, work on regional strategic options will not be undertaken as part of the individual company level WRMP process. Consultation on Cheddar 2 should be made through the regional group.	Section 12.7.4
			 On review of the dWRMP, the following properties / areas of land with National Trust responsibilities are relevant to the consultation: Cheddar Gorge. The Trust is the owner and custodian of land on the northern side the gorge. It is England's largest gorge, and from the high points, there are spectacular views over the surrounding landscape. The gorge also lies within the Mendip Hills Area of Outstanding Natural Beauty (AONB). Following our initial review of Bristol Water's draft WRMP24, we note an option being considered for the long term is a second reservoir at Cheddar. We understand that, some years ago, Bristol Water obtained planning consent for the scheme, but chose instead to focus on reducing leakages and demand management. Should the scheme be resurrected, it 		



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			is important that for any new development of physical assets the need and justification is clearly set out, in comparison to other options or alternatives. In addition, the likely adverse impacts on cultural heritage, landscape, nature and in respect of climate change should be fully assessed, and minimised and/or mitigated as appropriate. We would also expect proposed developments to maximise the potential benefits for people and nature. The National Trust's position with regard to this proposed development is reserved.		
136	National Trust		Where there are areas of National Trust land potentially affected by any stage of the overarching dWRMP options that we have not been specifically identified above, due to the absence of specific asset details and locations in the dWRMP, and/or due to the necessary optionality that such a long-term plan necessitates, the Trust would welcome further engagement on Bristol Water's draft WRMP24 prior to its finalisation.	Noted. Thank you.	N/A.
137	NFU South West		Water is a key resource that underpins the viability and profitability of the farming industry, its management and stewardship is a key concern for all farmers. Access to reliable and secure water sources is vital for farmers be they arable, horticultural, livestock, poultry or dairy farmers. The farming industry is currently engaged in a variety of initiatives that will improve environmental sustainability by increasing productivity and minimising inputs. Water management with a focus on both security of supply and on improving water quality are key elements of this. The farming industry is currently working on a variety of partnership initiatives across the area such as with the AHDB, catchment partnerships, government schemes, voluntary	Noted, and thank you for the response. We have for the past ten years worked closely with farmers in our Mendip catchments and in the Cam and Frome catchments to the Gloucester & Sharpness Canal. We have developed good working relationships, and supported capital improvements on many farms, and have provided free advice and management planning on many more. Focus has been on nutrient management, soil management, but also water resources - we include water harvesting infrastructure among our	N/A.



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			initiatives and partnerships with Bristol Water. However, we believe that there are further opportunities to work with the water industry in order to safeguard supplies and improve water quality.	grant offering. We plan to continue this work. Since the start of our Mendips catchment management programme, the phosphorus concentrations in the Mendip Lakes has reduced, and the algal bloom frequency has reduced.	
138	NFU South West		The agricultural sector recognises the need to become more resilient to water. This must be from the impact of climate change and changing weather patterns leading to crop and livestock stress and or the devastating effects of extreme events. In addition the impact of changes to climate will necessitate changes to farm management and business models impacting on every area from planning through to genetics. The NFU itself is promoting a number of steps that we believe are needed to build water resilience in agriculture. These include proper maintenance of the current drainage system so it can hold more water; help with grants and overturning bureaucracy associated will building on-farm water storage; grants and advice on water efficiency techniques (water recycling on farm, low input irrigation techniques) and making more of our on-farm groundwater resources. Despite surface water levels falling to very low levels in the late spring/early summer, the groundwater levels were still exceptionally high. But we are also aware that farming's relationship with the water sector is critical to building our water resilience. While water companies have an absolute duty to supply domestic customers with water, we recognise that this absolute duty does not avaten the approximate	There are no plans to alter river flows in our dWRMP that would impact on agricultural abstractions. Through our catchment management programme, we help farms to become more resilient, for example by offering rainwater harvesting equipment under our grant scheme, and by providing farms with free soil and nutrient management plans. In a drought situation, animal welfare with respect to livestock would be a key priority. However, this issue is dealt with in the drought planning process, not the WRMP: https://www.bristolwater.co.uk/about- us/our-plans/planning-for-drought/.	N/A.



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			However we would like to see Bristol Water outline the steps that they are taking to safeguard levels of service in water supply to rural businesses. Water supply will be critical for securing growth in the rural economy and we would like to see a focus on rural resilience in Bristol Water long term plans, particularly where they are working with the farming community on wider objectives.		
			This is a particularly important point for livestock businesses who can be at the end of long supply pipes and where low water pressure has sometimes been an issue. When water pipe connections are broken, livestock farms will require quick action from water companies.		
			In the Bristol Water area, we have a thriving horticulture sector that is quickly affected by reduced water availability in summer months. Soft fruit crops in particular would die in a matter of hours without access to water. And therefore any proposals to alter river flow or that would impact upon summer abstractors would have a direct impact on these businesses.		
139	NFU South West		It is important when discussing the impact of reduced water availability on the agriculture sector that the wider food picture is taken into account. How does the impact of reduced water affect food production in terms of area used to grow food, crops grown and varieties, impact on processing and manufacturing sectors, employment (including casual, part time and full time), economies, tourism and the environment as well as the individual business itself?	These concerns are important considerations for the wider regional planning process and security of water supplies for all users and the environment. We would encourage the NFU to engage fully in the regional planning process so that such issues can be considered holistically.	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
140	NFU South West		It is essential that the agriculture sector is engaged with throughout the process of both regional planning and the discussions with regard to potential implications on abstraction licences and water availability overall. It is not acceptable to advise abstractors at the time of licence renewal that changes are to be made to the volume available. Abstractors need to be engaged with at the start of any programme looking to change/vary abstraction licences. The discussion is required to ensure all implications of the changes/variations are understood by all parties involved.	Bristol Water do not administer abstraction licences. This comment should be directed to the Environment Agency.	N/A.
141	NFU South West		What data is being used to underpin the agriculture sector message within the regional plans and within the regulatory process for abstraction licences. It is important that the sector understands data source and modelling undertaken and accepts the information being presented for its sector.	Data sources relating to agriculture are referenced in the dWRMP. These include research undertaken for the West Country Water Resources Group, UKWIR and Bristol Water's agriculture customers. In 2014, Bristol Water also set up the Mendip Lakes Partnership to bring together organisations working to reduce the impacts of diffuse pollution from agriculture. The Partnership continues to work with farmers across the Blagdon, Chew and Cheddar Reservoir catchments to protect and improve water quality in the reservoirs and associated watercourses, and to enhance wildlife habitats.	N/A.
142	NFU South West		It is important that the agriculture sector has the time to respond and react to any proposed water availability reductions. Time is needed for engagement and discussions outlined in points 1 and 2 above. Time is required for reactive and proactive responses and for the right solution to be	See response to ref. 140.	N/A.



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			implemented. Often time is not available. We must be prepared to understand the impact on the wider food production picture and support the agriculture sector to build sustainability.		
143	NFU South West		We continue to believe that there could be significant opportunities to develop water storage features by working with farmers. We would like to see Bristol Water outline any steps that they are taking to work with farmers to identify opportunities for the construction of multi-use storage reservoirs or on rainwater harvesting projects. There may be opportunities to work together on these projects, particularly in locations where summer supplies and availability may be an issue. In our view it should be of the highest priority for Bristol Water to meet its responsibilities under Water Framework Directive. We would like to see continued activity on protecting the water environment. Our members are very aware of the impacts of the water industries activities on the water environment. Farmers are continually asked to improve and change practices in order to improve their environmental performance and reduce water impacts. Bristol Water have recently targeted investment at significant sewerage treatment works and infrastructure and will be delivering reductions in nutrient and sediments in watercourses. However, smaller rural systems must not be forgotten and we must all continue to work together at the catchment level to deliver continual improvements together. It is also important that these joint improvements are communicated to local communities.	Rain water harvesting infrastructure (tanks, pipework etc) are among those items which we explicitly offer funding for through our Catchment Grant Scheme, noting that take up has to date been extremely limited. This may in part be due to constraints on dairy farmers imposed by milk cooperatives on the water sources accessed by livestock. On farm strange reservoirs may be more applicable in a more arable and less dairy focused area of the country. Bristol Water does not treat sewerage so our impacts on the environment from a water quality perspective are relatively limited although we do work with Wessex Water to consider effects of our abstractions in terms of dilution of effluent discharged by their infrastructure. Where we are undertaking investigations and improvement projects we work closely with local communities, for example where we have adapting reservoir compensation flows to benefit the downstream River Chew around R03. We hope that the agricultural	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the
				community in our catchments will continue to have regard to regulations around agricultural pollution risk.	rdWRMP19
144	NFU South West		The NFU supports the need to expand strategic water supply infrastructure as critical response to climate change and population growth. However, it is critical that the importance of water to build resilience in our domestic food production systems is recognised and the NFU believes that farming businesses must be able to benefit from the additional water resources that new reservoirs will provide. Furthermore, it is important that the design and implementation of new water supply infrastructure and reservoirs does not have an adverse impact on farming businesses and should be carried out in a way that minimises the impact on land ownership and farming operations. We ask that Bristol Water continues engagement with landowners to ensure they are actively involved in the decision making at all stages.	Noted, and thank you for the response. Bristol Water will continue to engage with farmers, landowners and NFU.	N/A.
145	NFU South West		Catchment management initiatives have been a strong feature of the work of Bristol Water for a number of years. Bristol Water has taken an approach to work with partners for delivery which has and continues to work well. Farmers are required to work to strict regulatory standards and also adhere to both voluntary and industry standards which take them beyond the required baseline. There are opportunities for farmers to deliver higher levels of clean water where the environment, businesses and society as a whole can benefit. It is essential that these mechanisms are developed that include enabling farmers being free to choose the best measure for delivery to achieve any stated outcome. Ensuring that the value of the price paid reflects a true profit foregone approach is key. With the development of the new	Noted, and thank you for the response. Bristol Water will continue to engage with farmers, landowners and NFU, and to explore routes to ensure farmers are properly compensated for the environmental services they provide.	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			Environmental Land Management Schemes, there is still uncertainty for the farming industry and how they can be rightly incentivised for helping to improve the natural environment to help support water quality. Bristol Water should work closely with key partners to help support and engage with landowners to ensure best outcomes for water quality and resilience.		
146	NFU South West		Nature based solutions can help to restore, manage and protect our water resources while also increasing additional social and economic benefits to our rural communities. The agricultural industry can help support nature-based solutions for water security, by improving our soil health and resilience, as well as wetland construction, restoration, management and protection. Therefore, it is important that Bristol Water continues to engage with the land owners to support nature based solutions and potentially reduce further demand on water supplies	Noted, and thank you for the response. Bristol Water will continue to engage with farmers, landowners and NFU. We have worked closely with BART in recent years to find and deliver opportunities to install nature based solutions to reduce flood risk and increase infiltration. In a wider sense, most of the implementation projects on our WINEP are nature based solutions, such as restoring rivers to ensure they can adapt and function with flows provided via compensation.	N/A.
147	NFU South West		The NFU and its members are always willing to work with Bristol Water in order to develop catchment approaches and support farmers in their efforts to improve the water environment. However, these initiatives must be mindful that farmers run businesses and are under increasing pressures from a range of sources to deliver a variety of environmental objectives and this must be considered when planning catchment activities. We must also work together, and with other organisations engaged at the catchment scale, to reduce duplication of effort and improve the delivery on the ground. This will result in business benefits and cost savings for farm businesses and for Bristol Water.	Noted, and thank you for the response. Bristol Water will continue to engage with farmers, landowners and NFU.	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
148	Waterscan		We agree with the emerging proposal to develop a menu of commitments that will apply to the NHH market, including the commitment to a targeted NHH smart meter rollout and the water neutral development standards Bristol Water is producing as part of its draft WRMP. We are delighted to see the customer focus and collaborative theme continue throughout this document as this needs to become second nature to the industry to enable delivery of all short and long- term outcomes. We would like to see clearer acknowledgement about the partnerships Bristol Water will be building to achieve this and implore you to outline a position statement on future plans to expand water neutrality to cover Water Resource Zones in the area.	See response ref. 16.	Sections 12 and 15
149	Waterscan		Overall, the proposed approach setting out how Bristol Water will make sure there is a secure supply of water to customers in the future while also protecting and enhancing the environment clearly demonstrates that the lessons learned from WRMP19 have been extremely well considered as they directly pertain to the challenges faced in reflecting the business customer input to the assessment. This emergent holistic approach will no doubt drive improvement as each category along with the backing principles will drive greater value. We are in broad support of the approach, however, to elicit any form of confidence we would welcome metrics that are stretching and objectively measurable by those receiving the service.	Thank you. We are aware that metrics to objectively measure success in water saving are important for both customers and the company. For this reason, the metering option selected incorporated a platform by which household customers would be able to monitor their water use. Our smart metering programmes are however just beginning, and more work is required to detail the specifics of how they will work and be evaluated.	N/A.
150	Waterscan		Transparency of how both HH and NHH customer evidence and behavioural drivers will be used in decision making will exponentially drive greater recognition of the value of participation for customers and companies resource deployment alike, this will enable easier high-quality	The Bristol Water Challenge Panel provides assurance that Bristol Water has incorporated the preferences and priorities of its customers in its business plan (currently for 2020-2025). The panel has contributed to the design of the	Sections 12 and 15



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the
			engagement and exploration of broadening the value of the WRMPs through a customer lens.	research programme to find out the answer to key questions. It continues to act on behalf of customers and other stakeholders to scrutinise the focus and effectiveness of Bristol Water's engagement with its customers in informing its current service offering and its future plans as well as reviewing and challenging the company's performance against its economic, water quality and environmental regulatory obligations. Additionally, it monitors the design and implementation of the company's environmental and community Social Contract.	rdWRMP19
				Part of the smart metering programmes in the future will be to understand how the data collected can be used to inform water efficiency across the business. It is assumed that the Challenge Panel will be able to support the necessary research and scrutinise the performance of this area of work from the customer perspective as part of their normal operation. Within the demand options there have been costs included where necessary for staff hours dedicated to plan and monitor the efficacy of an option. In addition the move to smart metering will	



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				generate significant amounts of data to help further monitor the impact of options. This will enable us to make use of adaptive pathways and alter the plan as required depending on the performance of previously implemented options. Further detail will be added regarding the delivery of HH & NHH options, with a	
				specific focus on the engagement with retailers and NHH customers as this will be essential for fully delivery, and meeting targets (see response Ref. 16).	
151	Waterscan (general feedback)		On the whole, Waterscan supports the efforts made by Wholesalers to meet the supply and demand challenges facing the water industry in the coming decades, even though we believe there is much room for improvement. We support carefully managed investment into improving drought resilience, reducing leakage, and reducing per capita consumption.	Thank you.	N/A.
152	Waterscan (general feedback)		We expect Wholesalers to provide a clear, compelling roadmap to meet every target in their WRMP as the current goals are unhelpfully vague. The same applies to the industry- wide commitment to reach net zero operational carbon emissions by 2030. We recognise the temptation to fall back on national targets set by Defra (for example to reduce per capita water consumption by 9% by 2038) as this allows water companies to request funding through PR24 to meet these targets directly. However, it is essential that Wholesalers move more	See response ref. 45.	N/A.



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			quickly and go further than Government-set targets. This is especially important considering that per capita consumption excludes non-household (NHH) consumption, undermining the incentives and funding available for improving NHH water efficiency.		
			We are concerned about the setting of national targets and the tendency for water companies to default to these targets. There is a troubling lack of transparency over how these national targets were chosen and whether they are suitable or ambitious enough for particular catchments, water resource zones (WRZs), and/or water companies.		
			Given the risks that national targets have been watered down and do not push Wholesalers far enough, there needs to be greater clarity and justification around why goals and deadlines have been chosen. This is particularly relevant when percentage decreases still leave excessive leakage rates due to high starting points. For instance, roughly 24% of Thames Water's supply is currently lost to leakage, but halving this to 12% is still not nearly acceptable.		
			We do not believe that the current targets are challenging enough. Maintaining shockingly high leakage rates disables customer motivation to change behaviours and sends the de facto message that high leakage is both acceptable and the norm		
153	Waterscan (general feedback)		We support interconnected action to tackle climate change, for examples through net carbon neutrality goals and taking better care of local ecologies like sensitive chalk	As outlined in responses above, BRL is working with Environment Agency and continuing to investigate where	Sections 8 and 13.2.5



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			 environments. Anglian Water is so far the only water company to voluntarily cap abstraction licences by 2025, which will reduce their abstraction licences by 85%. We urge other Wholesalers to follow Anglian Water's example to strengthen environmental protections and to go beyond mandated targets. A recurring theme across the draft WRMPs is operational net zero carbon emissions targets, with deadlines beginning from 2027 for Essex and Suffolk Water and Northumbrian Water. We encourage water companies to measure, disclose, and work to reduce their carbon emissions – as well as their water footprint – through the Carbon Disclosure Project (CDP). We are also keen for Wholesalers to consider and share their position on water neutrality. 	abstractions are or could cause impacts to the environment and sensitive ecologies. For the final WRMP we will test sensitivity of the plan to 4.1MI/d loss of DO as agreed risk with EA. With respect to carbon emissions, Bristol Water's ambition is that by 2030 we will not make cause any GHG emissions to Earth's atmosphere through our activities to supply water to customers. We have proposed a mix of methods to achieve carbon neutrality by 2030. With respect to water neutrality, the standards we mention are not to be developed by Bristol Water, rather these are options that would be enacted by Government, that would help to support us in maintaining our supply-demand balance.	
154	Waterscan (general feedback)		 Wholesalers need to take anticipatory action before the final WRMPs are published in 2024. For Wholesalers who do not forecast a water deficit before 2040 (like Yorkshire Water, Essex and Suffolk Water, and Northumbrian Water), there needs to be greater emphasis placed on innovation to channel investment into preventive measures and scoping projects that the industry as a whole would benefit from. Such trials could include water neutral partnership work and developing final effluent reuse possibilities. 	Thank you. Bristol Water also does not forecast a deficit before 2040.	N/A.



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155	Waterscan (general feedback)		Controversial pollution and sewage discharge events must be reduced to as close to zero as possible. We expect pollution events to be a much more explicit focus in the final WRMPs. Failing to adequately acknowledge these events and to provide a transparent, transformative roadmap for how such incidents will be systematically prevented are blatant shortcomings in the current WRMPs. Pollution events affect the availability of water, the health of society, and the ecological status of river catchments. They also cultivate public distrust and cynicism in the water market, sentiments which are incompatible with positively changing consumer behaviour. The toxic consequences of pollution events lead Waterscan to demand that water companies lead a major cultural shift in the water market (see Section 2.4.). The carelessness of Wholesalers dramatically undermines the credibility, integrity, and potential of any efforts to reduce water demand and wastage or to better protect the environment and this must change.	Bristol Water, as a water only company, is not responsible for any sewage discharges or intermittent overflow discharges. Bristol Water is aware of the risks of its operations to water quality, which primarily arise from permitted discharges from water treatment works, and from discharges of silt to watercourses from excavations. We have processes in place to control the latter and are engaged in a process of MCERTS accreditation around the management of our permitted discharges as part of our AMP7 WINEP.	N/A.
156	Waterscan (general feedback)		While we support the consistent emphasis placed on partnership work, there was an overall lack of clarity and specificity over how such partnerships would be set up, run, and assessed. There is significant scope for more intensive, targeted partnership work under the umbrella of nature-based solutions, but it was not made clear how Wholesalers plan to engage with different stakeholders and under what terms.	Engagement with stakeholders is extremely important to Bristol Water. The way in which we engage depends upon the audience. That may be direct contact with existing customers, engagement with farmers and landowners through our existing catchment management programme or other partnerships. Or we may engage with other organisation in our industry and beyond as part of the West Country	N/A.



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			Wholesalers also need to play a greater role in researching the key challenges facing the water industry by working with collectives like the National Leak Research Centre (run by Northumbrian Water), the Water Research Institute at the University of Cardiff, and the Environmental Change Institute at Oxford University.	Water Resource Group. We have recently engaged with organisations in the Bristol Avon Catchment Partnership and West of England Nature Partnership to develop our environmental programme (WINEP) for AMP8 and have some exciting partnership projects in development. Please refer to Ref 130 for information on proposals with the NHH retailer	
				sector.	
157	Waterscan (general feedback)		Wholesalers have an untapped resource in Retailers to drive down NHH water usage. We believe Wholesalers need to develop a mechanism that empowers Retailers to offer this service to NHH customers. This would allow Wholesalers to focus on deliverables that cannot be achieved by third parties like leakage reduction, net zero, meeting household (HH) targets, and reducing pollution incidents.	Thank you. MOSL research has indicated that wholesaler led initiatives are the most effective short-term route to delivering NHH demand reductions. Through these initiatives and the clear national drive towards water efficiency, engagement with retailers will be required and lead to the development of retailer led initiatives. We respond to a similar point above - see ref 130.	N/A.
158	Waterscan (general feedback)		There is a serious lack of consideration in the draft WRMPs over how the Plans will affect other stakeholders, particularly NHH customers. There is a lack of transparency and clarity around the impact Wholesaler decisions will have on business customers. It is not acceptable to pass problems onto customers.	It is not clear from this comment what the issue is with the service that Bristol Water specifically has performed. There are no specific issues in the draft WRMP that we are aware of that should negatively impact upon non-household customers more than anyone else. Water efficiency measures should	N/A.



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			 While Wholesalers have a statutory requirement to protect domestic water supplies over NHH properties, this legal caveat should not translate into normal operating practice. This is particularly the case when NHH customers are proactive in managing and reducing their water use. These supply issues are happening now, yet are not analysed in the draft WRMPs. Given these issues, we require all Wholesalers to more carefully consider the cascading impacts of their Plans on other stakeholders like NHH customers. 	support businesses at the same time as contributing to the Government-led targets that apply to everyone. Our future ambition (https://www.bristolwater.co.uk/about- us/our-plans/our-long-term-ambition/) has been shaped by the views of our customers and stakeholders to address our shared challenges.	
159	Waterscan (general feedback)		There is a significant lack of clarity in the messaging around what the smart meter data is expected to achieve. For example, despite the rollout of new meters and water endet.	We recognise the important role that smart metering data can have in reducing both demand and targeting leakage. BRL's frontier leakage performance will mean that to target further reductions, effective use of widespread high resolution metering data may be required. BRL have also developed a number of demand options that seek to work with customers, both NHH and HH in delivering demand reductions through awareness and efficiency audits. Smart meters provide the best platform to assist in realising these benefits through effective monitoring.	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			to produce long-term behavioural change, meaning that this technology alone should not be relied upon or considered a magic bullet to reduce water consumption.		
			Taking these challenges into account, any smart meter investment should be focused on where there is both opportunity and the need for water reduction. We recommend water companies target the middle sector of the NHH market where a balance between opportunity and customer engagement to reduce water use.		
			Given the risk that large scale investment in smart metering generates excellent reporting but fails to tackle underlying issues, Wholesalers need to make greater efforts to fundamentally change perceptions of water as a critical resource. Changes to price and/or data alone will not be enough to galvanise the changes needed for the majority of the market.		
160	Waterscan (general feedback)		Water companies have a substantial responsibility to lead an urgent, large-scale cultural shift in the water industry. Perceptions are powerful and shape behaviours on all levels, so startling statistics on Wholesaler pollution events and leakage rates create a negative feedback loop that entrenches stagnation and poor practice. The market looks to Wholesalers for leadership in these and other areas. It is	Bristol Water is a supply only company, we are not responsible for pollution events associated with sewerage treatment. We lead the country with respect to leakage rates and will continue to drive	N/A.
			jarring that the more water a customer (particularly a NHH customer) uses, the cheaper this vital resource becomes. We expect Wholesalers to be much more proactive in reversing these perverse incentives in the final WRMP24s. Wholesalers need to change the narrative in the water market that propagates, rationalises, and normalises	Alternative tariffs and incentives for non- household water users is something we are considering as part of our WRMP. We would welcome the collaboration and support of retailers to understand	



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			inefficient, irresponsible, and uninspiring performance. Threats to water security, water quality, and water stewardship are very much present in the here and now, so Wholesalers must not allow the current culture to seep into yet another planning cycle.	how best to support business with water efficiency through incentive schemes and tariffs.	
161	Waterscan (general feedback)		On a presentation note, from the perspective of a reader, many of the Plans were extremely dense and formatted in a way that created barriers to close reading or clear understanding. This undermines the quality and integrity of the whole consultation process. The Summary documents often provided a useful overview, but the main documents were largely unwelcoming. For documents very often 100+ pages, it was surprising how often questions were left unanswered at the end. Wholesalers must think more carefully about their audience and the role these Plans play in the consultation process. Some of the more digestible Plans came from Affinity Water, United Utilities, Southern Water, South Staffordshire Water, and Severn Trent Water.	The WRMP process is extremely complex and thus the main technical documents are often highly technical and focussed on those regulators and technical experts responsible for ensuring the planning methods are carried out appropriately to deliver the outcomes expected of the industry. The summary documents are intended for a less technical audience and the summary will be reviewed and edited accordingly, alongside the final WRMP text.	N/A
162	Waterscan (Bristol Water specific feedback)		We are interested in the water neutral development standards Bristol Water is producing as part of its draft WRMP. We would like to find out more about the partnerships Bristol Water will be building to achieve this and wonder if there are future plans to expand water neutrality to cover Water Resource Zones in the area.	Water neutrality development standards described in our plan are not a standard that Bristol Water will author. These are standards we would like to see enacted by Government.	N/A.
163			The draft plans show that meeting water demand over the next 25 years is challenging, due to climate change, population growth and rightly rising environmental standards. The cost of living crisis is another restriction under	Bristol Water is committed to supporting its customers. A significant area of water efficiency, where reductions in demand can be made without compromising customers' lifestyles or livelihoods, is in	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			which water companies must plan, and reducing demand for water is an important way to keep water prices low.	helping people to change their water using behaviour. This remains a less well understood area of activity but is also an area of increased interest to customers as a result of the growing cost of living crisis, so we are working in partnership with other utility organisations, partner water companies in the West Country Water Resources Group (WCWRG) and academic partners, to help identify the most effective cost-saving, water-saving, energy-saving and carbon-saving approaches we can take.	
164	Everflow		Business (non-household) customers use around 30% of water supplies, but water efficiency work has focussed heavily on household rather than non-household customers over recent decades. It was expected that the opening of the business retail market would stimulate water efficiency delivery but neither customers nor retailers have been incentivised sufficiently for this to happen. Some structural barriers have contributed to this, and we helped develop the Retailer Wholesaler Group's plan, which proposes regulatory changes to provide the industry with targets, incentives and funding for water-saving interventions. We were pleased to see that Defra announced the 9% demand reduction target for NHHs. We would like to understand further how this will be applied in practice, particularly in companies' WRMPs. For example, will certain areas of England take on a greater share of water saving than others? It does not seem fair that already water stressed areas with high demand are asked to save more than others –	Following the introduction of the 9% reduction target, we are reviewing the demand options that we have developed to ensure that we have a suite of options available to us to support water efficiency in this area. Our current options include increased engagement with non-household customers in their water use, supporting these customers through site audits, targeted support on rainwater harvesting and water efficient options such as waterless urinals. This aspect of our plan shall be updated for the final draft. We respond to a similar point around engagement with non- household customers above - see ref 130.	Changes will be made in the final plan, Section 15.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			particularly with Ofwat's encouragement of water trading between regions.		
165	Everflow		Regional and wholesaler water resource management plans do not adequately consider the potential of the NHH market to deliver water demand reduction. Some general commitments to the NHH market are included, e.g., retrofitting NHHs with smart meters alongside households over 10 to 15 year periods, but we would like to see more details about NHH smart metering and water efficiency plans before final WRMPs	MOSL research has indicated that wholesaler led initiatives are the most effective short-term route to delivering NHH demand reductions. Through these initiatives and the clear national drive towards water efficiency, engagement with retailers will be required and lead to the development of retailer led initiatives. We respond to a similar point around engagement with non-household customers above - see ref 130.	N/A.
166	Everflow		Echoing MOSL's point from their WRMPs response, several WRMPs barely mention the NHH market in the main document, and in some cases, important NHH information is buried in appendices. The NHH market consumes 30% of water in England, so it's essential to include an overview of how it features in your plans in the main document. Business customers' involvement is essential to the industry meeting its demand reduction targets, but they have low awareness of water scarcity threats and how they could affect their businesses. Business customer awareness also feeds into general household awareness and employers are in a prime position to influence their employees' behaviour.	The non-household demand forecasts are provided in Section 6.10 of the dWRMP text. The options pertaining to non-household demand reductions are provided in Table 159 of the dWRMP. There are four separate options for non- household demand reductions in the dWRMP although the introduction of a 9% reduction demand target means that these are under review for the final draft of the plan.	N/A.
167	Everflow		This market is ideally placed to support overall demand reduction targets, which will avoid investing in expensive and environmentally destructive new infrastructure. Our market consumes a third of potable water in England and Wales and lends itself to very targeted interventions. For example, 3% of NHH customers use 72% of water in the NHH market – or	We agree with the comment that there are significant potential water efficiency benefits to be gained working with non- household customers in the UK. Bristol Water's current options include increased engagement with non-	Changes will be made in the final plan, Section 15.



From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
		20% of all consumption. Just 11,000 large meters and 152,000 medium-sized meters could be targeted for smart meters to achieve 80% of the impact of fixing leaks promptly and reducing consumption.	household customers in their water use, supporting these customers through site audits, targeted support on rainwater harvesting and water efficient options such as waterless urinals. This aspect of	
		Recent research by Artesia for MOSL found a strong business case for rolling out smart meters to NHH customers alongside domestic customers (e.g., by geographic area rather than prioritising one over the other). It also recommended companies without large-scale meter investment programmes would benefit from replacing or upgrading selected NHH customers' meters, particularly the largest	our plan shall be updated for the final draft following the introduction of the 9% reduction target. We respond to a similar point around engagement with non-household customers above - see ref 130.	
Everflow		customers and/or where businesses are close together. This market is ideally placed to support overall demand reduction targets, which will avoid investing in expensive and environmentally destructive new infrastructure. Our market consumes a third of potable water in England and Wales and lends itself to very targeted interventions. For example, 3% of NHH customers use 72% of water in the NHH market – or 20% of all consumption. Just 11,000 large meters and 152,000 medium-sized meters could be targeted for smart meters to achieve 80% of the impact of fixing leaks promptly and reducing consumption. Recent research by Artesia for MOSL found a strong business case for rolling out smart meters to NHH customers alongside domestic customers (e.g., by geographic area rather than prioritising one over the other). It also recommended companies without large-scale meter investment programmes would benefit from replacing or upgrading selected NHH customers' meters, particularly the largest	BRL will consider the current recommendations being made in the development of the national NHH smart metering strategy. The smart metering approach is currently under review by BRL.	N/A.
E	Everflow	Everflow Relates to	Prom Relates to Comment 20% of all consumption. Just 11,000 large meters and 152,000 medium-sized meters could be targeted for smart meters to achieve 80% of the impact of fixing leaks promptly and reducing consumption. Recent research by Artesia for MOSL found a strong business case for rolling out smart meters to NHH customers alongside domestic customers (e.g., by geographic area rather than prioritising one over the other). It also recommended companies without large-scale meter investment programmes would benefit from replacing or upgrading selected NHH customers' meters, particularly the largest customers and/or where businesses are close together. Everflow This market is ideally placed to support overall demand reduction targets, which will avoid investing in expensive and environmentally destructive new infrastructure. Our market consumes a third of potable water in England and Wales and lends itself to very targeted interventions. For example, 3% of NHH customers use 72% of water in the NHH market – or 20% of all consumption. Just 11,000 large meters and 152,000 medium-sized meters could be targeted for smart meters to achieve 80% of the impact of fixing leaks promptly and reducing consumption. Recent research by Artesia for MOSL found a strong business case for rolling out smart meters to NHH customers alongside domestic customers (e.g., by geographic area rather than prioritising one over the other). It also recommended companies without large-scale meter investment programmes would benefit from replacing or upgrading selected NHH customers' meters, particularly the largest	Weinter Comment Brittol Water Responses 20% of all consumption. Just 11,000 large meters and 152,000 medium-sized meters could be targeted for smart meters to achieve 80% of the impact of fixing leaks promptly and reducing consumption. household customers in their water use, supporting these customers through site audits, targeted support on rainwater harvesting and water efficient options such as waterless urinals. This aspect of our plan shall be updated for the final draft following the introduction of the generating one over the other]. It also recommended companies without large-scale meter investment programmes would benefit from replacing or upgrading selected NHL customers' meters, particularly the largest customers and/or where businesses are close together. BRL will consider the current recommendations being made in the development of the national NHH smart metering strategy. The smart metering approach is currently under review by BRL. Everflow This market is ideally placed to support overall demand reduction targets, which will avoid investing in expensive and environmentally destructive new infrastructure. Our market consumes a third of potable water in England and Wales and lends itself to very targeted interventions. For example, 3% of NHH customers use 72% of water in the NHH market – or 20% of all consumption. Just 11,000 large meters and 152,000 medium-sized meters could be targeted for smart meters to achieve 80% of the impact of fixing leaks promptly and reducing consumption. BRL will consider the current recommendations being made in the development of the national NHH smart metering strategy. The smart metering approach is currently under review by BRL.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
169	Everflow		 From our review of WRMPs, many wholesalers are intending to roll out smart meters from 2025 or have already started. However, there are no set dates for when every business will have one. Wholesalers that have already rolled out smart meters identified around 25% of the water being used by NHH customers is continuous flow – a large proportion of this could be leakage and/or wastage. Smart meters enable leaks to be detected much quicker so that wasted water can be minimised. One million smaller NHH customers use water in a very similar way to households (toilets, sinks, etc.) and have similar meter sizes and usage. 	Our plan is to roll out smart meters, where possible, to NHH customers across the planning period to help support customers with reducing their water use, identifying leaks etc. The number of meters that we intend to install as part of our plan will be presented in Table 2 of the WRP Tables.	WRP Tables
170	Everflow		We would like clarity on how many smart meters (AMI not AMR) you intend to deploy in AMP8 and beyond, including visibility for retailers on when and where they will be rolled out, to avoid duplication of effort or customers paying for loggers when they don't need to.	Following the introduction of the 9% reduction target, we are reviewing the demand options that we have developed to ensure that we have a suite of options available to us to support water efficiency in non-household customers. The number of meters available to non- household customers is recorded in the WRMP planning tables, Table 2.	WRP Tables
171	Everflow		We would like wholesalers to align with the national NHH metering strategy position on data sharing.	This request is noted and we welcome discussion with retailers on data management. However, we would need to carefully consider how data is shared and with whom to protect our customers.	N/A.
172	Everflow		Proactive logging and continuous flow/high usage alerts for customers via retailers are also key to obtaining 'in the moment' conversations about water efficiency which NHH	Our plan is to roll out smart meters, where possible, to NHH customers across the planning period to help	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			customers are more likely to engage with, so smart data should be shared with the customers' retailer.	support customers with reducing their water use, identifying leaks etc.	
173	Everflow		We would also urge wholesalers to pool their NHH benchmarking data (ideally nationally) and share this with retailers operating in their area, so that the benefits of big data can be realised and result in better targeting of water efficiency and leakage services by retailers.	See response to ref. 171.	N/A.
174	Everflow		National research by the RWG Water Efficiency sub-group steering group has shown that customer incentives to increase their water efficiency are insufficient and the savings required to achieve the customers' expected return on investment time unrealistic. The initial (time and money) investment required to achieve water efficiency relative to the size of their bill is a particular barrier to SME customers, which make up the majority of the NHH market. Wholesalers are in a position to apply for funding which they can use to incentivise retailers or collaborate with us on delivering water efficiency. A collaborative approach is important to avoid undermining competition and to increase customer uptake.	See response to ref. 130.	N/A.
175	Everflow		There is low demand for water efficiency services among businesses - even when they are offered for 'free' to the non- household customer. Retailers' relationships with their customers are key to improving this and communications by wholesalers and retailers must be coordinated.	See response to ref. 130.	N/A.
176	Everflow		We would like more detail on how water efficiency services will be offered to different categories of NHH customers.	See response to ref. 129.	N/A.
177	Everflow		We want to be able to offer water efficiency services consistently nationwide so that water saving is simpler for	Thank you for this comment.	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			NHHs to engage with. We would prefer a nation-wide approach to demand reduction so that multi-site customers have clarity about the services and funding and/or incentives available to them. This is another reason why wholesalers need to focus their efforts on incentivising and collaborating with retailers.	See also responses to ref. 129 and 130.	
178	Everflow		We would like to see true collaboration between wholesalers and business retailers that delivers value for customers, as well as environmental and water security benefits.	See response to ref. 130.	N/A.
179	Everflow		In a recent trial with a large water wholesaler targeting customers with continuous flows, we demonstrated the value of our enhanced data and relationship management by more than tripling their usual engagement rate. However, it's important that adequate funding is transferred to retailers to cover such marketing, service provision (e.g., leak detection or water efficiency audits, products etc) and/or contact list costs, at a market rate which recognises the quality of the data they've invested in improving and enhancing since market opening. Funding also needs to reflect actual costs of engaging and delivering such services. Wholesaler water efficiency incentive schemes for retailers to date have been based on	Thank you for this comment and see our response to ref. 130.	N/A.
			per litre usage reductions, and there are inadequate commercial retailer incentives. Due to low business engagement and willingness to pay for leakage and water efficiency services, retailers therefore have not been able to cover the costs of water efficiency services and delivering them.		
180	Everflow		While not all retailers will prioritise providing water efficiency services for their customers, those that do should not be prevented from providing competitive services and	See response to ref. 130.	N/A.



Ref No.	From	Relates to	Comment	Bristol Water Responses	Changes made to the rdWRMP19
			 innovations that benefit customers and the retail market, as well as the environment and security of supply. Being kept informed and involved in communications between wholesalers and customers is also crucial to maintaining great customer service. We would echo Waterwise's request last year for a wholesaler commitment to greater collaboration with retailers in the plan, and a more detailed plan for how they will deliver demand reduction in the NHH sector. This could involve: Technical support with abstraction options Providing a sterner 'police' type function when customers don't respond to retailers about potential leaks and over consumption (e.g., issuing leak notices and showing local connections with water deficits/risks to supply or the environment) Sharing smart meter and logger data Sharing plans for smart meter/logger roll outs Offering white label services (as most wholesalers already do for meter reading) for leak detection and repair, water efficiency site surveys and installing water efficiency products. However, we believe a competitive market for these services would serve customers best, so do not think that wholesalers should offer these directly to NHH customers 		
181	Everflow		Retaining TUBs and NEUBs for peak demand or droughts is regrettable for our customers, but if they must be used, we ask that the plan details how retailers will be involved in customer communications around these. Ideally communication protocols should be agreed in advance so that they can be sent out in a timely and organised way.	Communication protocols in relation to droughts are more relevant to the drought planning process. See Section 6 of the latest Drought Plan 2022: https://www.bristolwater.co.uk/about- us/our-plans/planning-for-drought/.	N/A.

Appendix B: Regulator Queries and Responses

Between the submission of the draft WRMP and the receipt of the formal consultation responses, Bristol Water responded to a number of director queries from our regulators. These queries and our responses are described in the table below. Our responses may have included revisions to the planning tables. These are not replicated here.

Ref	From	Query	Bristol Water Responses
No.			
1	Environ	We have undertaken a WRMP24 data quality assurance	Please find attached the following
	-ment	check to ensure that the WRMP data tables accurately	documents:
	Agency	represent the supply-demand balance, are calculated	Bristol Water draft WRMP24 Tables (for submission 21.10.22).xls
		correctly, that all required information has been entered and	(updated WRP tables)
		that the WRMP24 tables are presented in a way that	
		provides transparency on how the water balance has been	EA tables queries 17.10.22.doc (explanation of how each query
		arrived at. Please find enclosed the outcome of our	raised has been addressed in the tables)
		WRMP24 data quality assurance process for Bristol Water's	
		dWRMP data tables. QA on the supply-demand balance and	
		general completion of WRMP tables has been undertaken by	
		the Environment Agency, and QA on NPC and option costs	
		has been undertaken by Ofwat. This feedback combines the	
		feedback from both regulators. The tables below set out the	
		changes we would like you to make to your data tables.	
		Please note that Regulators may raise additional issues as	
		more detailed analysis is undertaken over the coming weeks.	
2	Ofwat	In the 'Water Resources Planning Tables -Instructions' we set	We struggle to answer this question fully at this stage, on the
		out our expectations that your WRMPs should provide	grounds that the guidance you refer to refers to a draft PR24
		information relating to demand management metrics that	methodology which did not contain sufficient explanation of the
		will align with the information included in your PR24	approach the guidance refers to. The WRMP guidance was written
		business plans to set PR24 performance commitment levels.	when Ofwat intended to describe "what base buys" and a
			methodology to calculate this which is not in the draft PR24
		The information you provide in table 2a should therefore	methodology, and therefore cannot be completed at this stage.
		represent the outputs of your preferred plan in terms of the	There is industry work to explore this which Bristol Water has
		forecast performance trends you propose to present in your	participated in (PR24 marginal costs and productivity study with
		PR24 business plans. Note the data presented will be	economic insight), but in our view this cannot be interpreted in the
		processed as required to set a PCL in the appropriate unit,	way Ofwat appear to suggest from draft WRMP data. There is no
		for example leakage reduction as a percentage reduction in	such methodology for the reasons we set out below.
		terms of a three-year average figure from a defined baseline.	



We will use the performance trends as submitted in your PR24 business plan when setting PR24 performance commitment levels.

In accordance with the guidance these figures should represent a normal year rather than a dry year or other scenario.

1. Could you please confirm that the figures presented in table 2a in the lines listed below represent how you would present your draft WRMP proposals in terms of PR24 business plan performance trends. If the data currently provided in table 2a does not meet this requirement, could you please provide an updated data table 2a containing the appropriate data.

- 1NY Total Household Consumption
- 2NY Average Household PCC
- 3NY Total Non-Household Consumption
- 4NY Total Leakage
- 5NY Distribution input

We queried in advance of responding to the draft PR24 methodology (specifically on leakage and whether given Bristol Water's position of exceptionally low industry leakage and the need for an intelligent pathway towards long term Government targets, and how this would be dealt with in terms of cost adjustment claims/service cost relationship or the business plan performance trends. See Appendix 2 of our draft PR24 methodology response in particular where we set out the challenges in trying to meet this expectation without Ofwat explaining "what base buys" as originally was intended for this draft WRMP guidance to be something we could reference in these tables.

For clarity we think the answer is that the information in 2a is currently baseline data and therefore leakage is the baseline forecast (not the preferred plan). This is correct for WRMP principles, but whether it aligns to the baseline performance trend is subject to interpretation. For instance, the natural rate of rise in leakage could be interpreted as an increase in leakage without the mains replacement levels included in the demand side investment in our dWRMP. This is an element of base and maintenance, as we reflected within the plan, but there are other drivers of change rather than just looking at leakage which also require mains replacement. Unfortunately, the current PR24 methodology does not consider this.

Our view is that if you want a basic answer to the performance trend question (which is what we think base expenditure delivers), then this is actually the forecast upper quartile level in 2024/25 for the industry, aligned with the CMA findings at PR19 and specifically for Bristol Water. Therefore, the information we include in table 2a is, correctly, our baseline of leakage unless we make further



	interventions other than base maintenance (but this would be at a higher cost than historic given the Natural Rate of Rise of leakage). The projection therefore assumes that constant leakage is base performance, and any difference from this is enhancement, as any other assumption does not make sense from a WRMP planning perspective of considering demand vs supply options of delivering future targets.
	From the perspective of this question on extrapolated leakage and other performance levels, there is a question of what is economically efficient where you have surplus supply demand balance, but society and Government expects an intelligent pathway to long term targets, and no obvious interim export opportunities (which are separately incentivised by economic regulation where they exist). Should this be the level of leakage that balances supply and demand? That wouldn't be economic efficient over the WRMP planning horizon, but would be if you were extrapolating performance levels based on the past.
	For instance Bristol Water has reduced leakage by 11.5% since 2020, 30% since 2015 and will deliver a further c8% reduction in 2022. Extrapolating that reduction forward in MI/d would leave zero leakage by c. 2032. But there would be a very high marginal cost of delivering that. The same applies to PCC etc, with a weaker engineering logic than that for leakage as the CMA found. Is that type of extrapolation sensible, and what methodology does Ofwat suggest is appropriate?
	If we understand the information the WRMP guideline the Normal year forecast requirements are set out under Section 6.2 Baseline demand forecast, so we have assumed that table 2a should reflect the baseline normal year forecast as it is not stated in the guidance



that it should be the preferred plan. The preferred plan wouldn't be the forecast performance trends (from base expenditure?) if this is what you mean in the PR24 draft methodology and business plan tables references in the query. In the tables guidance it does mention in reference to the overall WRMP under preferred (most likely) programme in the context of the whole table, but as the table also presents the final planning scenario for DYAA, it was taken that this was the reference (because this is dry year not normal as the heading implies). The specific line guidance for table 2a does not state whether the data should be baseline or final planning, but it is baseline correctly as we assume, if we have understood this extrapolated forecast methodology (which as stated below we have fundamentally disagreed with without the PR24 process including illustrating its limitations in Appendix 2). We would assume as it is the methodology consultation and not the final guidance, Ofwat will engage with us to understand our concerns, unless there is no intention to look again at this methodology and whether it is in customers' interests or otherwise, including the evidence we presented about how are we meant to extrapolate industry performance trends from base when the industry is underperforming overall on ODIs and overspending on totex.

We suggest a discussion from the practical perspective if you want final planning on leakage rather than baseline, and if baseline should be something else than the 2024/25 forecast position, given that base/ enhancement allocation for leakage spend has always been separate to the solution presented in WRMP, as otherwise we do not pick the correct options based on Average Incremental Costs. It may be our misunderstanding of the draft PR24 methodology, which we hope you will be able to clarify, because we would prefer to not divert from our understanding of



	our network and planning logic as it risks incorrect planning assumptions unless we can be crystal clear how to reconcile the two. If it's final planning rather than baseline, this will take some time to pull together as we will have to pull all the demand management options through to the normal year forecast, which we only have at a high level (i.e. not in the final planning tables - just in the micro-component model), because industry WRMP planning is for the dry year, and efficiency models and performance extrapolation that distinguishes between normal and dry year is not modelling that we understand has been undertaken anywhere as a methodology to date (and would need to be industry level to be meaningful to distinguish between performance gaps or inefficiency from the relevant weather).
	Similarly for other characteristics they are presented for WRMP planning requirements e.g. PCC is based on current levels rather than 2024/25 PR19 targets due to the shift with COVID from non-household to household consumption. This is then sensitivity tested as this is a key WRMP planning question. Again this challenge applies across the sector, so in these circumstances what methodology can be used for past performance / from base extrapolation. Is this the new normal, is a question Ofwat rightly postponed in terms of incentives for PCC in AMP7 to PR24.
	2.Could you please confirm the population figures that you have used to calculate your PCC figures and where these are presented in your plan.Bristol Water Response:The population figures used to calculate the PCC are those presented in the WRP table 3 BWXBRS. These align with the population forecast in our Microcomponent model.



			3. Could you please identify as requested in the 'Water Resources Planning Tables – Instructions' where you have explained the
			assumptions you have used to determine the normal year figures
			you intend to propose in your business plan
			Bristol Water Response
			The assumptions used to determine our normal year forecast are
			set out in our WRMP technical report section 6.6.
3	Environ	Can you confirm if your baseline position and the move from	Our baseline supply demand balance reports the 1:200 DO value
	ment	1:200 to 1:500 drought resilience is from 2025 onwards? It's	from base year to 2038/39, and moves to the 1:500 DO value in
	Agency	on page 5 of the Technical Document (text below) - It sounds	2039/40. This was done to prevent any deficit from the 1:500
		like you are starting from 2025 but I would like to check if	requirement driving early investment that would be addressed in
		that's	time via the delivery of the leakage and pcc
		ok?	targets.
		"Our baseline supply balance shows that population growth,	
		combined with the move from a 1 in 200 to 1 in 500 level of	You will see in the tables that the baseline DO drops between
		drought resilience, creates a deficit of supply against demand	2038/39 and 2039/40.
		in around 2040. This assumes that we hold leakage at 2025	
		target levels and PCC at broadly current levels.	Looking at the commentary in the WRMP this maybe isn't too
			clear, although it is discussed as part of section 11.2 on p140. We
			did discuss the assumptions around the 1:500 drought in our pre-
			consultation meetings with EA, although I realise you weren't party
			to those. I've attached the slide deck from our pre-consultation
			meeting in August and the point on 1:500 DO is covered on slide
			4. If it is helpful I would be happy to give you a briefing on the
			overall draft plan in lieu of the pre-consultation process you
			missed out on?
4	Ofwat	The Water Resources Planning Guideline (section 4.8) states:	Our WRMP19 addressed the forecast supply demand balance
		"Your baseline water resources planning scenarios should	deficit via the implementation of a number of leakage option
		include the following assumptions benefits of schemes that	(Active Leakage Control WRMP19 option D21.01 and D21.02).
		have met one and, or more of the following conditions: •	Together these deliver a leakage reduction to 32.1 Ml/d by
		have planning permission to go ahead; • a funding allowance	2024/25. No further demand or supply options were required over



		made by Ofwat in a business plan for delivery of the scheme; or • other necessary permissions such as abstraction licences	the AMP7 period. Leakage was therefore the only funded scheme benefit in our WRMP19 for delivery over AMP7.
		or environmental permits". Ofwat's November 2021 letter to Water Companies also said	In our WRMP24 submission, Section 7.3 sets out our baseline leakage policy, and on p114 confirms the delivery of the 32.1MI/d
		that: "Companies should set out what has already been, and what is forecast to be, delivered in line with WRMP19, as well as explaining where alternatives have been delivered in	target by 2024/25 (a 6.5Ml/d reduction on the 40.7Ml/d 2019/20 three year average, rounded).
		place of funded WRMP19 options and why these have resulted in better outcomes for customers and the environment."	"Our baseline total leakage forecast for assessment of our baseline supply-demand balance assumes we will to meet our target for total leakage of 32.1 MI/d by 2024/25 and maintain this level through the planning period, although it is important to note that
		Please can you confirm that all your funded scheme benefits from WRMP19/PR19 are included in your baseline supply- demand balance? This should include the date that the	our preferred plan is to reduce leakage further, and meet the 50% reduction target by 2050."
		benefit is realised is the same as proposed in WRMP19/PR19.	In line with the planning guideline, for the baseline supply demand forecast, we have assumed that the end of AMP7 leakage level is
		Please can you us let us know where we can find the evidence in your draft WRMP24 that these benefits have been appropriately accounted for in the baseline DO/WAFU forecasts? This should include evidence that the date of	this can be seen in line 29BL on table BWXBRS in our submitted WRMP24 planning tables.
		benefit realisation is the same as proposed in WRMP19/PR19.	Given the leakage target is in-built into the WRMP target, and this just reflects leakage, then this is a simple confirmation for us to make. This is consistent with table 4L, the commentary to table 6D and table 6F of our 2021/22 APR. Table 6F comments on water efficiency activity which is part of the baseline rather than being enhancement WRMP deliverables, that both contribute to PCC targets for avoidance of doubt, which are reset in our draft WRMP
	Ofwat		baseline.
S	Ulwat	sensitivity been undertaken around the year in which plans	fall into deficit until 2042-43. In the baseline SDB we have assumed
		aim to meet the 1-in-500 year level of drought resilience and	that we will maintain our resilience to 1 in 200 year drought until



other hard headlines to identify if there are any significant cost savings that could be achieved. •Please indicate where in your plan there is evidence that you have ensured the preferred programme represents low regret best value investment over the long term? •Please confirm if you have imposed any policy/decision making constraints to your decision making process. If yes, please indicate where in your plan you have explained why these are appropriate and in the interests of customers and the environment. Please indicate where in your plan you have provided sensitivity tests to show that this doesn't limit the cost benefit or value of the potential programmes.

2038/39 and then operate to a 1 in 500 year drought level of resilience from 2039/40 onwards. Due to the surplus in our supply area, this planning strategy prevents any schemes being developed before the benefits of the leakage and demand saving targets have had the opportunity to be realised. By implementing this approach, the delivery of the leakage and pcc policy targets for 2050, means that even under the 1 in 500 year drought level of resilience, the Bristol Water supply area is in surplus by 35Ml/d in 2039, and maintains the surplus our to 2080, by which time it has reduced slightly to 11 MI/d (largely due to forecast population increase). As a result of the requirement in the government direction and expectations to meet the leakage and pcc targets in 2050, this drives the increased surplus in the Bristol Water supply area, and therefore there is not any sensitivity to test within the supply demand balance relating to cost savings associated with the 1 in 500 year drought level of resilience. This is consistent with the "intelligent pathway" we discussed with Ofwat in terms of profile of future leakage and PCC reductions, as described further below. •Our preferred plan is driven by delivering the government expectations relating to PCC and leakage reductions. No further options are required. The best value options for delivering the government targets have been selected via an extensive options appraisal process to identify the feasible and constrained options list (WRMP24 section 12.7) and a programme appraisal and optimisation approach, using a pragmatic optimisation-based approach in which various objectives and the corresponding metrics can be combined to identify a best value plan. This approach is set out in section 14.2 of the draft WRMP24. All options were considered in the context of the environmental appraisal (section 13 of the draft WRMP24). •Our preferred plan is not based solely upon the requirement to solve the supply-demand deficit, but also to deliver leakage and


			PCC reductions by 2050 as specified in the government direction and expectations. The steps implemented to identify the preferred plan are set out in section 14.3 of the draft WRMP24. We tested our plan under different scenarios aligned with the requirements set out in the EA Guidelines and the Ofwat common reference scenarios (as set out in the document PR24 and beyond: Long - term delivery strategies and common reference scenarios (2021)). Details of this assessment are provided in section 16 of the draft WRMP24. This reflects the "intelligent pathway", recognising for leakage that steady progress would be attractive from an efficiency, reputation and consumer perspective rather than a step change, which would also reflect a sensitivity around the timing of delivery of long term PCC targets.
6	Ofwat	Can you please confirm that the financial information in your draft WRMP was submitted in 2020/21 prices, as mentioned in the WRMP guidance?	•As reported in our response to the query issued by Ofwat/EA on 14th October 2022 and received by Bristol Water in the e-mail dated 17th October 2022, yes the financial information presented in the tables is expressed in 2020/21 prices.
7	Ofwat	 a)Please can you explain the interaction between your target headroom scenarios and the adaptive planning method, in particular how you have ensured uncertainty has not been double counted. b)You note that supply side options could be required under a plausible worst-case scenario. Please can you explain how your preferred plan will change in response to this deficit, what your monitoring plan will be, what the trigger and decision points will be to implement these supply options. c)Please can you clarify what you mean by "There is therefore no enhancement expenditure associated with the alternative programmes, different to the preferred scenario." 	Query a) We set out in section 14.4 of the draft WRMP24 (p 189) that due to the baseline supply demand balance showing that we remain in surplus for the first 17 years of the planning period, there is not significant uncertainty within the early years of our plan. Based on the evidence set out in this section of the plan we have not developed a formal adaptive planning approach whereby multiple programmes or options are considered and decision points identified. We have, however, tested our plan via scenario assessment to understand the likely effects of the biggest uncertainties that could influence the plan. These scenarios are aligned with those set out in the Environment Agency WRPG and the Ofwat common reference scenarios.



	regrets" ofwat core pathway differ from other alternative	The only scenarios tested that have a different headroom
	pathways proposed.	uncertainty are the different climate change scenarios (Scenario
	d)Please can you explain how the scale of investment	ref 2 and 3 in table 16-1, p 205 in our dWRMP24). No double
	proposed in this WRMP compares to WRMP19.	counting has taken place here because for each climate change
	e)Please can you describe the continuity between WRMP19	scenario we adjusted the headroom uncertainty to reflect the
	and WRMP24 including progress on schemes previously	scenario being modelled. So the supply demand balance
	planned to start in 2025-30.	developed for the low/benign climate change scenario (PB2.6)
		includes headroom uncertainty specifically associated with the
		PB2.6 climate change uncertainty distribution. Similarly the
		high/adverse climate change scenario (PB8.5) includes headroom
		uncertainty specifically associated with the PB8.5 climate change
		uncertainty distribution. The table in annex A shows the different
		headroom distributions for each of the climate change scenarios
		and the different headroom allowances included for each of the
		scenarios.
		No other uncertainties significantly overlap with the scenarios
		assessed.
		Query h)
		When we tested our draft WRMP24 we identified that supply
		options could be required under 2 of the scenarios tested: Scenario
		6 - EA high population growth and Scenario $8 - Plausible worst$
		case. In both of these cases the supply options are not required
		until beyond the statutory 25 year planning period (scenario 6
		=2074 and scenario 8 =2062). Our preferred plan is therefore not
		anticipated to change in terms of supply side options within the
		first 25 years, and we will monitor this position via the statutory
		process of WRMP annual reviews and the 5 yearly review and
		updates of our plans.
		Query c)



	In table A1 (p215) we set out the assumptions applied to completing the WRP tables. Table 7d in the WRP Tables requests data on enhancement expenditure for alternative programmes. As there is little to no variance between our preferred plan, the least cost plan and the Ofwat core scenarios, we have inputted zeroes into this table. The statement in table A1 (p215 of our dWRMP24) is intended to clarify this assumption.
	In WRP Table 7 we set out the option differences to the preferred (most likely) programme for the Ofwat Core pathway in row 38:
	Query d) We have collated the investment data for the preferred plan for WRMP19 and that for WRMP24 in one workbook for comparison purposes. This is supplied as file 'WRMP19 and WRMP24 FP options costs comparison.xls'. Due to the requirement to deliver the government targets for leakage and PCC reduction for WRMP24, the level of investment required has significantly increased compared with WRMP19, where we were investing to address any supply demand deficit identified only, as opposed to investing to deliver government targets, whether there was a supply demand deficit or not.
	The increase in expenditure therefore reflects: a) The increasing marginal cost of delivering lower levels of leakage, which can only be achieved through a combination of a) smart metering to identify customer side leaks and b) pro-active mains replacement at increased levels. Our plan recognises that some of this will reflect base maintenance, but the full cost is included in the WRMP24. See section 15.1.3 of the technical report for our dWRMP.



	 b) The demand reductions to meet Government PCC targets require progressive smart metering programme out to 2050, with related schemes. This investment delivers both leakage and PCC benefits. c) There are no selected supply schemes – this is therefore the
	same as WRMP19.
	Query e) The continuity between WRMP19 and WRMP24, and progress with implementing our WRMP19 is set out in section 3.3 of the draft WRMP24 (p46). This points towards the detail of our progress with implementation being reported in our WRMP Annual Review report. Our latest review was reported to Defra in June 2022. We have included a copy of this report with this response. Details of the progress within AMP7 against our forecasts and targets are provided in section 7 (p23) of this document (Water Resource Management Plan 2019 Annual Review 2021/22).
	As noted above there are no schemes specifically due to start in 2025/26 in the previous dWRMP (other than ongoing leakage and demand management). Also note that early progress on smart metering and PCC (through Resource West) has been proposed as part of our DEFRA accelerated investment submissions.
	Effectively we achieve the 32.1Ml/d leakage target (6.5Ml/d reduction on 2019/20 three year average) that is the 2024/25 commitment (and also for note the 2022/23 year annual target). There is then the "intelligent pathway" of leakage reductions discussed with Ofwat and the EA in our pre-meeting towards long term Government 50% leakage targets (c22Ml/d by 2050). There is then the shift of consumption we have experienced between non-household and households, with a higher PCC baseline and the



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	need therefore to have universal smart metering (without the ability to charge on this basis) in order to meet Government PCC targets – this builds on the work already in place to deliver the WRMP2019 supply/demand balance.
	One indication of why continuity is appropriate is that the experience in the Bristol Water area during the 2022 drought appears to indicate that the dWRMP approach is appropriate – the first stage of the drought plan trigger levels were not reached because of the resilience of the supply arrangements, although this will feature in the 2022 annual WRMP review as further information emerges. However at this stage there is little emerging evidence that contradicts the dWRMP.
In relation to options costs for option ID: HH_M_009 (AMR), (Option description: Progressive smart metering automatic WCWR switch (HH_A_001) with Watersmart Technology (personalised billing, behavioural changes) (AMR): 1.Have there been any significant changes in the cost estimates of this option since WRMP 19? If so, what has caused these? Are they a result of general price pressures in the economy, methodological changes in the estimates, or some other factor or factors or some combination of causes? Please be as specific and detailed as possible. 2.What allowances are made for project management, risk and on-costs. Please justify why they reasonable? Are there any other particular factors that explain their prices relative to other options? 3.Can you assure us that the WRP guidance has been followed when appraising these options? 4.Are there any non-economic benefits that should be considered. Please explain where these are presented and discussed in your draft WRMP	Question 1: Option ID HH_M_009 (AMR) was not included in the WRMP19. This option was developed as part of the work the West Country Water Resource Group did to look at demand options that could deliver the government targets relating to PCC and leakage reduction. The metering options assessed within the WRMP19 are summarised in the table below. Not all of these were costed as they were not taken through to the latter stages of the options appraisal process. The two that were costed are highlighted in Green and cost information provided in the accompanying spreadsheet. No metering options were taken through to the preferred plan for WRMP19. It is not therefore possible to provide a like for like assessment of cost changes for WRMP24 option HH_M_009 (AMR):
	In relation to options costs for option ID: HH_M_009 (AMR), (Option description: Progressive smart metering automatic WCWR switch (HH_A_001) with Watersmart Technology (personalised billing, behavioural changes) (AMR): 1.Have there been any significant changes in the cost estimates of this option since WRMP 19? If so, what has caused these? Are they a result of general price pressures in the economy, methodological changes in the estimates, or some other factor or factors or some combination of causes? Please be as specific and detailed as possible. 2.What allowances are made for project management, risk and on-costs. Please justify why they reasonable? Are there any other particular factors that explain their prices relative to other options? 3.Can you assure us that the WRP guidance has been followed when appraising these options? 4.Are there any non-economic benefits that should be considered. Please explain where these are presented and discussed in your draft WRMP.



	5.What if any other steps is the company taking to ensure	on a comparison with the traditional metering programme
	best value for customers? Please explain where this is	approach
	presented in your draft WRMP.	Rejection does not preclude the continuing of the "traditional"
	6.Have you ensured the costs are enhancement only and do	metering approach and given asset life, does preclude the
	not include any base elements?	installation of smart meters at a later date as part of a meter
		renewal programme if further studies/technology advances
		demonstrate a cost-beneficial strategy
		Rejected at options appraisal Stage 3, therefore not costed.
		C02 Compulsory near-universal metering of domestic customers,
		i.e., all remaining unmeasured households across the whole
		company (ARM or smart metering) where practical and economic.
		This option was rejected following further consideration of
		customer acceptability based on the latest information available
		about customer preferences (set against the cost-benefit expected
		from the updated supply deficit assessment that was not available
		at the start of the option appraisal process). The company already
		has a programme of change of occupier metering and other
		metering options within the Final Constrained options list to
		address the expected scale of deficit and so this option is not
		considered necessary in the short to medium term. This option
		was not costed.
		C05 Compulsory metering of all domestic customers - all
		households (new and existing) due to water stressed area status.
		Bristol Water is not designated as a water stressed area and supply
		deficit forecast indicates that it is unlikely to meet the criteria
		Most of new properties are already metered and other metering
		ontions are included in the Feasible Ontions lists that are not
		dependent on Water Stressed Area designation. Rejected at
		ontions annraisal Stage 1 therefore not costed
		CO8 Selective metering of domestic customers based on high
		consumption or a sprinkler use and/or zones of high demand
1		l consumption e.g. sprinkler use and/or zones of high defilidhd.



	Option was assessed as a Constrained Option, but not selected for
	the preferred plan.
	C09 Selective metering of domestic customers- Accelerated
	metering. Install a meter into all households but let the household
	decide whether to switch from a rateable value to a measured
	charge. The long term plan is to compulsory switch over billing
	regime- AMR or Dumb meters. Option is very similar to other
	metering options but rejected as it carries much greater
	uncertainty in terms of delivering demand savings. The option
	allows households to opt out of the metering charge and therefore
	the benefit may not materialise in the short to medium term of the
	WRMP19 planning horizon. Rejected at options appraisal Stage 1,
	therefore not costed. Rejected at options appraisal Stage 1,
	therefore not costed.
	C10 Selective metering of domestic customers - Social housing .
	The metering of social housing would be undertaken within a
	number of the other metering options thus there would only be a
	small benefit from only focusing on social housing, therefore
	option rejected on the grounds that there are other better
	metering options. Rejected at options appraisal Stage 1, therefore
	not costed.
	C11 Selective metering of domestic customers - "the difficult ones"
	Scheme would only be implemented upon universal
	metering of 90% of Bristol Water's supply network. This option
	should be reassessed at that point and taking account of the
	demand position and supply-demand balance prevailing at this
	juncture. Rejected at options appraisal Stage 1, therefore not
	costed.
	C12 Enhanced promotion of free meter option to unmeasured
	households beyond the promotion assumed in baseline demand
	forecast. Option was assessed as a Constrained Option, but not
	selected for the preferred plan.



	C13 Metering on Change of occupier (all domestic customers) - compulsory- not just encouraging homeowners. Bristol Water reviewed and confirmed its change of occupier metering policy following the initial fine screening of options and confirmed it is compulsory; therefore this policy is now incorporated into the baseline demand forecast and this option is consequently already assumed to be in place for the future. Rejected at options appraisal Stage 3 and incorporated into baseline assumptions. Not costed as part of WRMP. C15 Change of occupier metering (large gardens only). Option only focuses on one type of property and therefore expected benefit is low. Option very similar to option C08. Following rejection, Bristol Water subsequently reviewed and confirmed its change of occupier metering policy and confirmed it is compulsory; therefore this policy is now incorporated into the baseline demand forecast and this option is consequently already assumed to be in place for the future for ALL households not just those with large gardens. Rejected at options appraisal Stage 1, therefore not costed. C16 Selective metering of commercial properties. Most commercial properties are already metered and the remaining unmetered properties tend to be low consumption and so demand savings are very small. Rejected at options appraisal Stage 1, therefore not costed. C23 Selective metering (agricultural troughs). Rejected due to the small volumes of water involved and the practicalities of installation of meters. It is considered that many farms have their own water supply and so savings will be small compared to other demand management options. Rejected at options appraisal Stage 1, therefore not costed.



Question	2
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A summary of the costs used in developing our metering options is provided in the table below. This includes the source of the information used. Much of it is based on industry information, research carried out by industry experts and West Country Water Resource Group company specific data. Project management costs are included under the Watersmart costs and maintenance costs. Costs associated with risk are included in the AMR/AMI meter installation costs as contractors include a risk allowance as part of their delivery costs for installations. On-costs (additional costs associated with putting the meter in the ground) are included within the AMI/AMR cost as appropriate with some additional costs within the Watersmart element of the option.

We believe these costs to be reasonable based on the data and information we had available to Bristol Water at the time of development. Metering costs will be reviewed as we progress to developing our final WRMP24 in the context of group purchasing power now we are part of Pennon. The cost assumptions presented in the table below were used consistently to develop all the metering options assessed for the draft WRMP24 options appraisal process.

Question 3:

The options appraisal process used is set out in Section 12 of our draft WRMP24. This confirms that the process is compliant with the WRP Guideline. The method was undertaken in three main stages;

Identification of an unconstrained list of possible options
 Development of a feasible list of options and
 Options appraisal.



	The constrained options were subject to detailed statutory environmental and social assessment (SEA, HRA and WFD). Natural Capital Accounting, Biodiversity Net Gain and Invasive non- native species assessments were also undertaken as required in the WRP Guideline.
	Options were also evaluated in light of our customer research evidence on water supply services.
	Question 4: Non-economic benefits of the options were assessed as part of the options appraisal process. This is discussed in Section 12.8 of the draft WRMP24, with further details being provided in Section 13 (Environmental Appraisal (SEA/HRA etc)). This includes the Carbon Assessment (Section 13.8) and the Customer Preferences in relation to the WRMP options (Section 13.9). In addition to the summaries in the main technical report, we have also published the full SEA, HRA, WFD, NCA, BNG and INNS assessments as appendix to the WRMP should you wish to refer to the further detail contained within them.
	Question 5: The approach used to develop the best value plan is set out in Section 14 of our dWRMP24 (Programme Appraisal). The focus of the Bristol Water WRMP is to deliver the leakage and demand reduction policy requirements set out in the Government Expectations for Water Resource Planning (April 2022). In delivering these there was no further supply demand balance problem to solve. The options to deliver these policy targets were optimised against the best value criteria and metrics in the decision making model. As mentioned in previous queries and at our pre-submission engagement meeting, we have followed an



"intelligent pathway" approach for meeting policy targets which reflects a best value approach, when considered against alternative potential profiles which could see little progress followed by a step change in demand at the point of 1 in 500 year resilience being considered.
As part of the public consultation on our draft WRMP24 we are asking customers if they support the demand and leakage targets in the context of the likely bill increased associated with the preferred planning scenario. We will take into consideration the feedback we receive from customers in developing our final WRMP24, amongst other considerations such as the synergies with other statutory and long term investment plans.
Question 6: Details of the expenditure are set out in WRP table 8. Business Plan Links. For our metering options all expenditure is assumed to be new meters so it is represented in enhancement expenditure. There is no expenditure in the meter replacement lines. This option was originally planned to be delivered over a 10 year period, with meters being replaced before the end of life and therefore the costs were all correctly allocated to 'enhanced'. However, during the development of the best value plan, this option was brought forward to begin in AMP8 and changed to be delivered over a 25 year period. As a result some dumb meter replacement should be included in base activity as end of life rather than accelerated replacement. Therefore, table 8 will need to be updated to reflect this with some of the costs split out to be included in base activity. This will be reassessed and updated as part of our statement of response. The total overall costs will,



10	Ofwat	•Please indicate where in your plan there is evidence of in combination assessments included for environment and deployable output at the programme level as part of best value plan assessment	Section 13.4 of our draft WRMP24 discusses the results of the Habitats Regulations Assessment (HRA) where the in-combination effect of both the demand management options and the water supply side options have been considered. The assessment concluded that none of the demand management
			options included in our WRMP24 would have a likely significant effect on any European site, either alone or in combination with other options, programme or plans. However, the screening assessment concluded that nine out of eleven water supply options would have likely significant effect on one or several European sites, either alone or in combination with other options, programme or plans.
			The HRA Screening assessment concluded that nine of options would have a likely significant effect on a European site, including:
			 P01_01: Charterhouse P01_02: Forum R005: Cheddar Reservoir
			 •R007: Pumped Refill of Chew Valley Reservoir •R08_02: Bathford •R08_03: Frome at Frenchay •R014: Avonmouth WWTW Direct Effluent Reuse •R016: Huntspill Transfer
			•R24: Honeyhurst.
			therefore they were not taken through to the Appropriate Assessment stage.



			Full details of the HRA are set out in the technical report in Appendix D of the dWRMP24, specifically section 4.2 and 4.3 where the assessments of both the preferred programme and the alternative programmes are discussed. The information from all the environmental assessments carried out (summarised in Section 13 of the dWRMP24 with details of each assessment in the relevant Appendix) on the options was used to inform the decision making framework developed for the programme appraisal and optimisation process. This work is presented in section 14 of the draft WRMP24.
11	Ofwat	Assessment of water needs In relation to your Supply Demand Balance, please can you point to the section of your plan that: a)explains the SDB starting position of the WRMP24 planning period compared to the SDB in the final WRMP19 2024-25 year, including justification for any significant difference (as per WRPG sections 6.2 and 6.4); b)explains how recent actual data is informing an improved understanding of household and non-household demand following the Covid-19 pandemic; c)provides assurance that you are proposing informed and efficient Level of Service glidepaths on 1:500, TUBs, NEUBs and EDOs.	Question a: Details of the baseline components of our supply demand balance and the assumptions used to develop them are provided in sections 5, 6, 7, 8 and 9 of our draft WRMP24 with an overview of the baseline supply demand balance in section 11. Progress with implementing our WRMP19 and how this delivery has been accounted for in our WRMP24 starting assumptions is provided in section 3.3 and section 3.4. Question b: How recent actual outturn data has informed our starting position for WRMP24 is provided in section 3.3 and 3.4. In addition further details of how our base year assumptions for the demand forecast components have been reconciled to the observed level of consumption with the base year has been provide in section 6.2. The long term COVID-19 impacts on demand are discussed in section 6.5.3 on p92.



Our final planning levels of service glidepath is presented in WRP table 2f. The commentary on our levels of service is presented in section 15.2.1. On review of table 15-10 in this commentary section we can see that there is a typo in reference to the Emergency Drought Order Actual LoS reported from 2039/40 onwards when the % annual risk was correctly reported as 0.20% but the Actual LoS was reported as 1-in-200 years (not 1-in-500 years) which does not align with the % risk score. We will amend this typo for the revised draft WRMP24. No changes are required to the WRP Table as this presents the correct glidepath.

We have presented the switch from 1 in 200 year drought resilience to level 4 restrictions to 1 in 500 year drought resilience as occurring in 2039/40. This was to prevent the reduced resource associated with this level of resilience from driving investment early in the planning period during our programme appraisal process. This allowed the effects of the leakage reduction programme and the demand reduction options to take effect on the supply demand balance and prevented unnecessary options being selected before 2039/40. The intelligent pathway for delivering the leakage and pcc policy targets then is allowed to deliver the demand savings required to build the resilience to the 1 in 500 year drought by 2039. We will update the commentary in the revised draft WRMP24 to make this assumption and the justification for it clearer.

Section 15.2.1 sets out a number of work items that we are delivering between our draft and final plan (assessment of the RO1 yield and reservoir control curve review) that will be incorporated into our final plan, and may result in an improved understanding of our resilience risk.



12	Ofwat	In your dWRMP2024 Technical Report document you set out in table 12-1 (page 146) the individual feasible leakage options you considered in the optimisation process. As we understand from the document these options were optimised using RPS Group's Strategic Optimisation of Leakage Options for Water Resources (SoLow) tool to produce the aggregated leakage reduction scenarios in table 12-2 which are included as options in table 4, Options appraisal summary of your dWRMP planning tables.	The data requested is provided in the attached spreadsheet: Query BRL-dWRMP-009 Data table.xls. Data is provided on an annual basis for the 25 year planning period over which the option is being delivered. A summary of this data is provided below. This is taken from the RPS technical report (Bristol Water WRMP Leakage Options Development 20 October 2022).
		Please provide the costs, water savings (in Ml/d) and unit costs (£m/Ml/d) for each of the options listed in table 12-1 and provide detail of contribution each option makes to both the overall demand reduction and the total cost of the selected option presented in your preferred plan*. Please provide details of where unit costs may vary across the planning period. For example, there may be different phases	These are gross costs, and there is an overlap for base mains refurbishment in our plan. This is discussed in section 15.1.3 of the draft WRMP24 technical report (p193), where we note that in our plan, asset renewal is required at a higher rate than in previous planning periods (at a rate of 125 km in AMP8 – 0.35% of mains replaced each year, rising to 1% p.a. for AMP9 and beyond) as this is the most effective way to tackle the background leakage level.
		of pressure management, represented as different options, for which you have considered different delivery costs and benefits. Please provide as much granularity of options as you are available to, for example differentiating between new pressure management schemes and optimisation of existing schemes.	The unit costs for mains renewal vary across the period and generally increase – this is because the assumption of targeting more beneficial mains repairs to reduce leakage first is the optimised outcome of the RPS analysis. This can be seen in the attached spreadsheet by taking the cost and dividing by the volume for each option line.
		*From your dWRMP planning table we understand that your preferred option is 'Compiled results from SoLow run Data 131 05 Linear 50' delivering a reduction of 10.14 MI/d by 2050.	Full details of the assumptions used for each of the options set out in table 12-1 are provided in the RPS technical report 'Bristol Water WRMP Leakage Options Development' in section 2.3.5 through to section 2.3.16. We have attached a copy of this report to this response for your reference should you require this detail.
13	Ofwat	In relation to decision making please can you point to the section of the plan where the following is evidenced or provide additional information on the following query:	The differences between the least cost and best value programme are set out in section 16.2 of the draft WRMP24 technical report. Due to Bristol Water being in a supply demand surplus position at



14	Ofwat	1)Where are cost drivers presented to explain the difference in expenditure between the least cost and best value programme? Please can you inform us of the impact that moving to a 1-in- 500 year resilience level has on your company Deployable Output, the year this happens and where this can be seen in your WRMP data table lines.	the beginning of the planning period in 2025, and the implementation of the leakage and PCC reduction targets, the assessments showed that there was very little difference between the least cost and the best value programme. The difference is that under the least cost programme we would not bring in our smart metering option (HH_M_009(AMR) Metering and water efficiency customer education awareness) until 2030. In the best value plan, smart metering has been brought forward to 2025 to support the leakage strategy and help better understands the customer water use. This brings the cost of smart metering forward into AMP8, but better supports the delivery of increased meter penetration. WRP Table 7 sets out the Adaptive programmes and the data for the least cost scenario is presented here. This includes the associated supply and demand data (Table 7a and 7b) as well as the least cost Totex (table 7c) increases (line reference AP6FP) and savings (line reference AP7FP) compared to the preferred plan. Our baseline supply demand balance reports the 1:200 DO value from base year to 2038/39, and moves to the 1:500 DO value in 2039/40. This was done to prevent any deficit from the 1:500 requirement driving early investment that would be addressed in time via the delivery of the leakage and pcc targets. In the WRP tables (table 3. BWXBRS, row ref 6BL, columns Z and AA) the baseline DO drops between 2038/39 and 2039/40:
			AA) the baseline DO drops between 2038/39 and 2039/40: This shows that there is a 5MI/d reduction in DO associated with
			this change in resilience. This is discussed in section 11.2 of our draft WRMP (p140).
15	Ofwat	1.Summary of enhancement expenditure and benefits to be	Question 1:
		delivered across the 2025-30 and 2025-50 periods	



	We have reviewed the benefits of the draft WRMP24 and
We have reviewed the information provided in Table 8 of	enhancement costs of delivering them in both table 8 and the
your draft WRMP submission and have summarised the	summary tables you presented in question 1 (tables A and B). We
enhancement costs and benefits in table A and table B	have identified some errors in the data presented in table 8 as a
below. Our assessment of your draft WRMP will include a	result of the accumulative and/or in year assumptions. In
review of the benefits and the costs to deliver them.	summary:
	•The leakage benefit presented in table 8e was presented as an in-
We want confidence in the numbers we will review as part of	year benefit, not an accumulative benefit. This has now been
the analysis as this will inform our draft WRMP feedback and	corrected to an accumulative benefit.
assessment of whether this has been addressed and why	•The benefit associated with the demand management and
changes have been made in the final WRMP.	metering options was calculated as if it was an in year benefit, but
	the data presented in WRP table 5 was accumulative, resulting in
Can you please confirm that the benefits of your draft	incorrect values being reported in table 8. This has now been
WRMP24 and the enhancement costs of delivering them are	corrected and table 8 updated.
correct in tables A and B. These should reflect the options	
identified in your preferred programme within your draft	We have updated table A and B to reflect the corrected values in
WRMP24. Please highlight where there are any discrepancies	table 8e (see below). WRP Table 8 has been updated and an
or issues and provide updated numbers for Table 8 where	interim updated version accompanies this response. We will re-
necessary.	issue a fully audited version of our planning tables as part of our
	Statement of Response submission.
Please see the notes below that identify how we have	
interpreted Table 8 and some corrections we have made to	Question 2:
the template in order to produce the data in tables A and B.	The options selected to deliver the preferred plan in our WRMP do
Also please note there are further questions relating to this	not use AMI meters. No AMR meters will be replaced with AMI
query below numbered 2 onwards.	meters in our preferred plan, therefore there are no enhancement
	costs associated with replacement of AMR meters with AMI
Could you please confirm the basis on which you have	meters.
provided the benefits in table 8e for your preferred	
programme. Do they represent a cumulative total benefit or	Question 3:
the total benefit for the individual time period eg the year or	Our preferred plan does not include any strategic schemes. The
the five-year period?	benefit delivered by strategic schemes is therefore zero. We have
	updated the tables below to state this and also amended the data



 Tables A and B have been completed assuming the data is cumulative: Table A lists the benefits reported in 2029-30 Table B lists the benefits reported in 2045-50 However, we note for the leakage benefit line the trend is not increasing suggesting these may not be cumulative figures. Note 1 – Benefits to strategic schemes will be captured in supply-side or interconnector benefits. We consider it is unlikely these benefits will be released in the 2025-30 period due to the longer delivery times for these schemes. Note 1 – Benefits to strategic schemes will be captured in supply-side or interconnector benefits. We consider it these benefits will be released in the 2025-30 period due to the longer delivery times for these schemes. Note 1 – Benefits to strategic schemes will be captured in supply-side or interconnector benefits. We consider it these benefits will be released in the 2025-50 for some schemes and request further detail see question 3 below. Further notes on analysis Based on responses to previous queries we assume all expenditure is provided in the 2021-22 price base The data above is provided for your preferred (most likely) programme We have corrected a formula error in lines D1 and D2 to ensure that lines C10-12 and C13-15 are included in the capex and opex totals 	for the leakage and demand options to be consistent with our response to question 1.
capex and opex totals 2.Expenditure relating to the replacement of existing AMR meters with AMI meters	



		In lines C10, C11, C13, C14, C16 and C17 the enhancement	
		costs associated with replacement of existing basic meters	
		with AMR or AMI meters is captured. We note that the table	
		does not provide a line associated with enhancement costs	
		relating to replacement of existing AMR meters with AMI	
		meters.	
		Could you confirm and provide details of any enhancement	
		could you commit and provide details of any emilancement	
		costs relating to replacement of existing AVR meters with	
		AWI meters? Please indicate if these costs are included in	
		your existing preferred plan in an existing line and identify	
		them separately on the attached spreadsheet "Metering data	
		for query BRL-dWRMP-012'.	
		3. Benefits from strategic schemes	
		In Table 8 the benefits from strategic schemes are not	
		currently separately identified. Could you please complete	
		the tables below to indicate the amount of benefits	
		attributed to strategic schemes.	
16	Ofwat	1.Variance in base expenditure - table 8a	Question 1:
		We have reviewed the information provided in table 8a of	Leakage:
		your draft WRMP submission. We note that your submitted	We set out our assumptions for leakage reduction in the
		table does not contain any figures and therefore does not	dWRMP24 on page 192-193 whereby the costs reflect the marginal
		identify any variance in base expenditure from historical	cost beyond our 100km per AMP current baseline. We have
		levels as a result of delivery of your preferred programme.	therefore included further leakage reductions as enhancement,
			including the cost in subsequent periods of maintaining leakage at
		Could you please confirm that you expect no variance in base	this level. The costs become base costs at future price reviews. In
		expenditure from historical levels to result from delivery of	our assessment we recognised that further leakage reductions
		your preferred programme?	involve mains replacement, we therefore deducted 20km p.a. (c.
			0.35%pa) from the enhancement cost to recognise that this
			component was already a base commitment. Note that this pre-



-		
		dates the Ofwat PR24 final methodology which made equivalent assumptions, we understand. For leakage we therefore can confirm that we expect no variance in base expenditure from historical levels to result from the delivery.
		Metering: Our response to query reference BRL dWRMP_006 (question 6) highlighted that on reviewing our metering assumptions we identified that some dumb meter replacement should be included in base activity as end of life rather than accelerated replacement, due to a change in the delivery period for the best value plan. Therefore, table 8 will need to be updated to reflect this with some of the costs split out to be included in base activity, although we assessed at the time that this would be de-minimis over 2025-30 due to the very low likely replacement of meters purely based on age or failure due to the recent acceleration in metering since our adoption of a change of occupier approach. This will be reassessed and updated as part of our statement of response. The total
Ofwat	In relation to comparisons in population forecasts between WRMP19 and draft WRMP24 can you please explain the following: 1.What the change is between the population forecast in your WRMP19 (for 2025-26 and 2029-30) and the numbers presented in your draft WRMP24 (for 2025-26 and 2029-30)? 2.Explain why this change is appropriate in the context of outturn numbers and revised population forecasts since WRMP19?	Question 1: The attached spreadsheet (BRL Population forecast data summary.xls) shows the population forecast for 2020-21 to 2029- 30 for the WRMP19 and from 2021-22 to 2029-30 for WRMP24. It also reports the outturn population reported for our WRMP19 Annual Review for both 2020-21 and 2021-22. This shows that the outturn data has been consistently lower than the forecast population as presented in WRMP19. Our WRMP24 forecast was based off the outturn data for 2021-22 (as our base year), using the latest information available at the time of assessment. Overall the population forecast for this time period out to 2030 is lower in the WRMP24 than was forecast in the WRMP19.
	Ofwat	Ofwat In relation to comparisons in population forecasts between WRMP19 and draft WRMP24 can you please explain the following: 1. What the change is between the population forecast in your WRMP19 (for 2025-26 and 2029-30) and the numbers presented in your draft WRMP24 (for 2025-26 and 2029-30)? 2.Explain why this change is appropriate in the context of outturn numbers and revised population forecasts since WRMP19?



3.1	That your draft WRMP24 forecasts are appropriate, again	Question 2:
in	the context of new data (including new ONS forecasts) and	The change in the WRMP24 population forecast compared to
an	n explanation of how you have used the Ofwat common	WRMP19 reflects the rebase of the forecast to the latest available
ret	ference scenario for growth (please provide the population	outturn data, and the update of the forecast itself in the context of
nu	umber difference between the Ofwat common reference	the latest data and information available from local authorities and
SC	enario and draft WRMP24 preferred plan for 2029-30,	the ONS. This reflects the methodologies set out in the WRP
20	034-35 and 2039-40)?	Guideline. Full details of our approach and methodology for the
		population forecast are set out in the dWRMP24 Section 6.3 p78-
		89. Our preferred scenario uses the Plan based forecast data using
		the local authority projections, as required under the WRP
		Guidelines.
		Question 3:
		Our assessments for the dWRMP24 were based on the latest
		available information at the time of the assessment (2018 sub-
		national population projections, 2011-202 mid-year population
		estimates at output area, 2018 based sub-national household
		projections, and Census 2011). We are aware that additional
		information is being released from the ONS relating to Census
		2020 on an ongoing basis, and we will be reviewing our forecasts in
		the context of this information as we develop our revised draft
		WRMP24.
		We assessed the Ofwat common reference scenarios for growth as
		part of testing our preferred plan. We presented the results of this
		assessment in section 16 Testing the WKMP' of our dWRMP24.
		Table 16-1 on p 205 sets out the scenarios tested and the
		associated assumptions. The Otwat Low demand scenario used
		the UNS population and nousehold projections (our trend based
		analysis), and the High demand scenario used the Local Authority
		population and nousehold projections (our Plan based scenario).
		The population and property projections used for the Ofwat high



			demand scenario align with our preferred scenario (using the local
			authority projections as required under the WRP Guideline). All
			the population data for these assessments are presented in the
			attached spreadsheet (BRL Population forecast data summary.xls).
18	Ofwat	PCC	Q1 (a & b)
		1.PCC data presented in table 2 – delivery of PR19 PCL	We are committed to working towards delivery of our PCC PCL,
		In table 2 line 2NY 'average household - PCC' you are	and have a number of initiatives in place to support this over the
		forecasting to deliver a three-year average PCC level of 151.3	remainder of AMP7. Details of these have been set out in our
		l/h/d in 2024-25.	Annual Performance Report (p155) and information was also
			provided in our WRMP19 Annual Review for 2021/22 Section 5.3
		Reviewing this against the 2019-20 three-year average	(p19) (copy attached to response). However, the PCL was set prior
		baseline figures (148.9 l/h/d) for your PR19 PCL indicates a	to the COVID-19 global pandemic and the changes in lifestyle and
		proposed increase of 1.6% by 2024-25. However, your PR19	behaviours that have occurred as a result of this. We have not yet
		PCL for 2024-25 is to deliver a 6.3% reduction.	completed a full year without any restrictions in place following
			the pandemic, and therefore we are still working to understand
		Could you please confirm if you intend to deliver your PR19	the long term effects of this on customer water use in the home
		PCL and:	and at work. Initially though, there was generally a shift from
		a. Provide further explanation if you do not intend to deliver	usage at work to usage at home, reflecting the large major office
		the PCL;	based knowledge economy within Bristol. This was reflected in our
		b. Provide further explanation for the reasons why your PCC	WRMP19 annual review , and therefore this explained the COVID-
		trend does not indicate it will be delivered; and	19 impact. We have seen non-household volumes substantially
		c. Provide a PCC forecast for the 2022-23 to 2034-35 period	recover during 2022-23, and household volume increases perhaps
		that is representative of the annual PCC performance trend	lower than might have been expected. However it is too early to
		you would present in your PR24 business plan table for PCL	be definitive on 2022-23.
		setting based on your WRMP24 proposals.	
			We set out in our WRMP24 our baseline PCC assumptions in
		Business demand	Section 7 (p112). The forecast provided in our WRMP24 reflects a
		2.Non-household consumption data in table 2 – historical	realistic estimate of where we think PCC may be by 2024/25 at the
		outturn data and performance trend	start of the planning period in order that our strategy to deliver the
			long term target of 110 l/h/d PCC by 2050, is able to be developed
		In table 2 line 3NY 'total non-household consumption' we	in a realistic context with the appropriate level of water efficiency
		note that the data presented for 2021-22, 57.15 Ml/d does	option included within our WRMP. We believe that this is



not align with historical non-household consumption data for 2021-22, 52.66 MI/d. Note 2021-22 data was previously provided in response to our information note, IN22/02, 'Cost assessment data requests'.	appropriate and realistic water resource planning, using the latest data and information to inform our forecasts. We scenario tested this assumption and whether the interventions in our WRMP were sensitive to the short term PCC delivery, and this assumption had specific Executive and Board scrutiny, being clear that it did not
Please can you provide an explanation for this and a provide forecast non-household consumption trend for the 2017-18 to 2049-50 period that incorporates the outturn data for	mean that our intention of achieving the three-year average level for PCC in the annual number for 2014/15 was being diluted.
2017-18 to 2021-22 (as provided in response to IN22/02).	We will therefore be implementing our PCC strategy for the remainder of AMP7 striving to reduce PCC as much as possible
This trend should also represent the business demand performance trend you would present in your PR24 business plan table for PCL setting based on your WRMP24 proposals.	with the aim of delivering our PCL, but our WRMP forecast reflects the realistic estimate of where we think we will be starting AMP8 given our current understanding of the effects of the COVID-19 pandemic has had on customer water use, thus enabling us to plan appropriately for the delivery of the long term target of 110 l/h/d by 2050.
	Q1 (c) Our PR24 business plan is still under development, we have therefore not yet produced the PCC forecasts that will be used in this plan. There are elements included within the Defra accelerated investment submission (related to Smarter, Healthier, Homes, accelerated smart meter roll out and Resource West) that would also amend the PCC forecasts depending on the outcome of this process. Our WRMP24 forecast will be used to inform this work in the context of our long term commitment to deliver 110 I/h/d PCC by 2050.
	Q2 The model developed to produce our Non-Household forecast was produced by consultants Experian prior to the outturn data for 2021/22 being available. The data presented for 2021/22 in our



		planning tables was therefore a forecast from this model rather than outturn data. We have also checked the historic data and slight discrepancies between the WRMP24 table 2 and the reported Non-household outturn data. This reflects that the model was developed using measured non-household data for the historic data set. The forecast data from 2022/23 onwards included an allowance for unmeasured non-household consumption. We have updated the historic data to be consistent with the outturn data reported for Non-household demand. We have provided an updated set of WRP tables showing this data update in table 2 line 3NY. The data in the response to IN22/02 data collection is therefore correct for 2021/22 actuals for business demand, rather than the draft long-term forecast pre final outturn data. In line with our response to Q1 (c) our PR24 business plan is still under development, we have therefore not yet procured the business demand performance trend for PCL settings. Our
Ofwat	1.Enhancement costs associated with the replacement of	Company interim response
	basic meters with AMR meters	We did not have any AMR/AMI enhancement replacement at
	On reviewing responses to our previous queries regarding	PR19. In our responses to query references BRL dWRMP_006 and
	table 8 we have noted that the WRMP table guidance for	BRL dWRMP-013 we explained that our final plan will need to
	lines C10, C11, C13 and C14 contains text that has been	include a reflection of the change in meter strategy to delivery
	copied from the annual performance report in error. The text	over 25 years from 2025, resulting in some dumb meter
	specifying that the lines should only be completed by	replacement being included in base activity as end of life rather
	companies allocated ennancement expenditure at PR19	than accelerated replacement. We committed in these responses
	should be disregarded.	response process due to us requiring support from PPS to
	Could we therefore please ask you to confirm if any	complete this work. Based on this query it looks like the
	enhancement costs associated with your proposed upgrades	requirement from Ofwat is to provide this undate in advance of
	of basic meters to AMR meters (as identified in table 2c)	the Statement of Response. We have contacted RPS about their
	Ofwat	Ofwat 1.Enhancement costs associated with the replacement of basic meters with AMR meters On reviewing responses to our previous queries regarding table 8 we have noted that the WRMP table guidance for lines C10, C11, C13 and C14 contains text that has been copied from the annual performance report in error. The text specifying that the lines should only be completed by companies allocated enhancement expenditure at PR19 should be disregarded. Could we therefore please ask you to confirm if any enhancement costs associated with your proposed upgrades of basic meters to AMR meters (as identified in table 2c)



		have been captured in your table 8, table A and table B	availability to rework the assessment and deliver this information,
		updates sent in response to our query-BRL-dWRMP-012?	and we will be able to get an updated table 8 to you by Thursday
			9th February.
		If this is the case can you confirm the expenditure lines in	
		table 8 that these costs have been recorded against?	Company updated response
			In order to provide the data requested as an interim submission
		If enhancement costs associated with the replacement of	we have updated table 8 to include an indicative allocation
		existing meters with smarter meters are not captured in your	between new and replacement AMR meters consistent with what
		latest version of table 8 could you please provide amended	was submitted in the draft WRMP. As set out in our interim
		'metering improvements' total enhancement expenditure	response we anticipate that we will be reviewing the metering
		and total benefits figures for the 2025-30 and 2025-50	option in the context of any change in meter strategy as part of our
		periods that include these figures? This will enable us to	statement of response. It is therefore likely that there may be
		update tables A and B provided in response to query BRL-	further changes to the metering programme that are not captured
		dWRMP-012.	here. The updated table accompanying this response is therefore
			provided on the basis that it is an interim update for information
			purposes only and any final tables will be formally issued with the
	-		Statement of Response following internal audit and sign off.
20	Ofwat	In finalising our options assessments, we have noted some	Points to note about this data:
		inconsistencies across the completion of WRMP Tables 4 and	
		5.	All collated data presented in the tables below is taken from table
			4. This represents the total cumulative savings for each option to
		Please set out the following information on options to meet	2049/50.
		public water supply demands for those in the feasible list and	
		preferred best value list (at 2050 where relevant), without	For information, the data presented in table 5 for the preferred
		duplication from sub-options or variants, and (where WAFU	programme is the derived in-year (non-cumulative) savings in MI/d
		is involved) specific to your water company water resource	for each option.
		2011es.	The large perceptage of MATH values are due to the plan erecting
		•WAELL gain of ontion, specific to your company, by type and	a significant surplus as a result of delivering the policy targets set
		total	a significant surplus as a result of delivering the policy largels set
		•Saving in demand of ontion specific to your company by	ontions therefore deliver yield in excess of the forecast deficit in
		type and total	order to meet these targets
			order to meet these targets.



		•% of 2050 supply / demand balance by type and total	
		A suggested table format is included below (though we	
		would expect many more categories). Alternatively, if this is	
		already summarised in your draft WRMP or appendices, please direct us to this.	
21	Ofwat	1)Please could you quantify the reduction in MI/d	Question 1:
		requirement that arises from testing the benign common	The Bristol Water plan does not report a deficit in the baseline
		reference scenarios for climate change, demand and	supply demand balance until 2042/43. It is therefore not possible
		abstraction reductions, respectively, compared to the most	to report a change in the 'requirement' needed under the different
		likely/preferred scenarios?	scenarios. We have therefore populated the table below with the
			difference between the preferred scenario baseline SDB and the
		2)Please could you confirm that, in testing the low	assessed common reference scenario baseline SDB. The volumes
		definition:	the table
		vinclude agreed WINED changes and license canning, and	Cuestion 2
		• Include agreed WINEP changes and incence capping, and	Question 2:
		use local reviews to remove licence reductions with	represents low abstraction reductions and we tested higher
		significant uncertainty to form a plausible 'extreme low'	abstraction reductions in our scenario assessment. In the case of
		scenario.	Bristol Water we currently do not have any known abstraction
			reductions agreed via current investigations, therefore we have
		If so, please could you set out the MI/d impact of licence	not included any assumptions relating to this in our preferred
		reductions with significant uncertainty that you have	scenario. Similarly our BAU+ scenario was used to inform the long
		removed from the BAU+ scenario in each AMP, to form the	term view of environmental destination. However, in the case of
		low abstraction reductions scenario?	Bristol Water this currently represents a comparatively low level of
			licence reduction (3.28Ml/d in 2049/50). We have therefore did
			not feel it was appropriate to reduce it further.
22	Ofwat	These set of queries are to help us understand your approach	Question 1:
		to climate change impact forecasting and the consequences	
		to the supply-demand balance in your draft WRMP. This	



builds on the related query looking at all the benign common reference scenarios compared to the WRMP24 most likely equivalents.	Forecast climate change impact on deployable output (DO) taken from the WRMP19 final planning tables, and the draft WRMP24 planning tables.
climate change impact on deployable output (DO), and provide a confirmation that these match those presented in the latest draft WRMP data tables (for the WRMP24 values).	Question 2: a) Full details of our WRMP19 climate change assessment approach are set out in section 10 of our final WRMP19. The
2.Can you please outline and describe the following: a. The WRMP19 climate change emission scenario, projection(s) and percentile probability level used. b. The WRMP24 preferred plan climate change emission	the time (UKCP09 climate change projections). The medium emissions scenario was used in the 2080's. The best estimate for the effect of climate change in the 2080;s was selected as the closest scenario to the overall average of the data set (100
scenario, projection(s) and percentile probability level used. c. The WRMP24 low common reference scenario climate change emission scenario, projection(s) and percentile probability level used.	scenarios sample set). b) The WRMP24 preferred climate change emissions scenario was from the UKCP18 probabilistic projections for the RCP6.0 (medium scenario) at the 50th percentile.
3.Can you please quantify (in Ml/d) the climate change uncertainty contribution to target headroom for 2025, 2030, 2035 and 2040, and explain and justify why this is	c) The WRMP24 low climate change emissions scenario was from the UKCP18 probabilistic projections for the RCP2.6 (low scenario) at the 50th percentile.
appropriate given the chosen scenario/projection and probability levels applied in the draft WRMP24 preferred plan?	Question 3: The climate change uncertainty allowance included within headroom is set out in the WRP Table BWXBRS row ref 46BL and 46FP. This is summarised in the table below.
4.Explain and provide justification for the draft WRMP24 preferred plan climate change emission scenario, projection(s) and percentile probability level used, and the appropriateness for this planning period and in the context of adaptive planning.	The climate change distributions in headroom were derived using the outputs from the assessment using the probabilistic projections for the relevant climate change scenario (RCP2.6 / RCP6.0 / RCP 8.5) for the 5th, 50th and 95th percentiles of climate change impact on deployable output as min, mean and max values for climate change impact in the triangular distribution in the
	headroom monte carlo assessment model. A separate headroom



			assessment was carried out for each probabilistic climate change
			scenario (RCP2.6 / RCP6.0 / RCP 8.5).
			Question 4:
			change emission scenario is set out in section 0.4 of the draft
			W/RMP24 The chart in figure 9-2 (n130) shows where all the
			scenarios sit in terms of impact on DO for the 1 in 500 and 1 in 200
			deployable output assessments. The PB6.0 is illustrated to be a
			mid scenario with a distribution that captures a representative
			amount of uncertainty associated with our understanding of the
			likely impacts of climate change.
23	Ofwat	These set of queries are to help us understand your approach	Question 1:
		to drought orders and permits and the consequences to the	Data used to populate the table below is from the following
		supply-demand balance in your draft WRMP.	sources:
		1. Please provide the following data on the impact of	 WRMP19 data from WRP table 10 cell P7
		planned changes in use of supply-side drought orders and	•WRMP24 data from WRP table 6
		permits on the supply-demand balance between WRMP19	
		and WRMP24 and over time in the draft WRMP24.	Please note that in both the WRMP19 and the WRMP24 benefits
			from the supply side drought permits are not included within the
		2. Where there are differences in the benefits that supply-	baseline or final planning supply demand balance. The information
		side drought orders and permits make between the	is provided in the 'Drought Plan Links' tables as additional yield
		WRMP19 and WRMP24 plans please explain why. For	available under a drought situation, as set out in the drought plan.
		example, changes in assumed benefit or planned frequency	Question 2
		of use, etc.	Question 2: The banefits of the drought permits were re-assessed for the 1-in
		3 Where there are differences in the benefits that drought	200 and 1-in-500 drought scenarios using the stochastic data
		orders and permits make over time please explain why. For	analysis This is where the slight difference in outputs results from
		example, changes in assumed benefit or planned frequency	However the 1-in-500 benefit for WRMP24 aligns with the historic
		of use, etc.	drought benefit assessed for WRMP19.
		4.Please explain the process for choosing the planned	
		changes in drought order and permit use in the draft	Question 3:



	1		
		WRMP24? For example is it a company policy choice, or has each order/permit been assessed based on environmental risk and the costs/benefits against other options. If it is based on a risk based or CBA approach please provide details of each.	As set out in WRP table 2f (lines 2.1FPL and 2.2 FPL) there are no changes over the planning period to the frequency of use of the supply side drought permits (levels of service). Any benefits of the drought permits are aligned to the assumed drought severity, but as stated in the response to question 1, these benefits are not included in the baseline for final planning supply demand balance.
			Question 4:
			As stated in the response to Q3 there are no planned changes in drought permit use within the draft WRMP24. This is due to the Bristol Water SDB being in surplus at the beginning of the planning period, and the plan being driven by the delivery of the leakage and demand reduction government policy targets, resulting in the surplus position being maintained.
24	Ofwat	Thank you for contributing to the query process during our	Query 1
		draft WRMP assessment.	Bristol Water's draft WRMP best value plan was made up only of
			demand management options, and we expect this to remain the
		For our continued engagement on the WRMP process, and	case for the revised draft and final versions; there is no inclusion in
		preparations leading into the PR24 process including the	the Bristol Water WRMP of benefits of, or costs for, regional
		relevant parts of the PR24 Quality and Ambition Assessment	resources being developed through the RAPID gated process.
		(QAA), we have identified some areas which require	
		additional clarification.	Query 2
			As for Question 1, Bristol Water's draft WRMP best value plan was
		Understanding mapping and assumptions for costs, benefits	made up only of demand management options, and we expect this
		and performance in WRMP data tables, RAPID gate	to remain the case for the revised draft and final versions; there is
		submissions and PR24 business plan tables.	no inclusion in the Bristol Water WRMP of benefits of, or costs for,
			regional resources being developed through the RAPID gated
		1.Cost data is presented in different formats throughout the	process.
		WRMP data tables and also for the RAPID gated process.	
		However, we expect consistency between these and clear	Query 3
		mapping to understand any assumptions made when	WRMP performance for PCC, leakage and business demand are
		allocating costs between tables and lines. The PR24	presented on an annual basis and have been modelled and profiled



methodology made clear that we expect final WRMPs to be consistent with submitted business plans: This consistency should include the scale and timing of need, the performance levels forecast to be delivered, and associated investments and requested enhancement costs.	to meet Government targets. These will form the basis of PCL, noting that as discussed with Ofwat and EA during consultation meetings (5th April 2023 and 23rd March 2023 respectively), in order to reduce risk to customers we feel it is appropriate to acknowledge that AMP7 targets for PCC may not be met, and to reflect this in the WRMP baselines.
Can you please confirm that the costs in following WRMP	
data tables and any RAPID gate submissions will be based on	Query 4
 the same core data, using the same cost assumptions and clearly state how the costs interact and map between data lines (eg what cost metric lines in table 5a-c are used to inform the totex presented in table 4 – totex prior to option in use and table 8 – expenditure lines): Table 4 – Options appraisal summary (in particular 'totex prior to option in use') Table 5a-c – Cost profiles Table 8 – Business plan links 	We anticipate taking the approach outlined above and adhering to the Ofwat table guidance.
2.We also expect the water resource (MI/d) benefits of	
options/programmes presented in the WRMP data tables	
and RAPID gated process to be consistent. Can you please	
(MI/d) in following WRMP data tables and the RAPID gate	
submissions will be based on the same data and clearly state	
how the benefits interact and map between tables:	
•Table 4 – Options appraisal summary (in particular 'Gains in	
WAFU / Savings in Demand on full implementation (MI/d)')	
 Table 5 – Option benefits 	
•Table 8 – Business plan links	
3.For performance data can you confirm that the WRMP	
performance trends for PCC, leakage and business demand	



presented on an annual basis (ie not three year averages) will	
form the basis of your PR24 business plan PCL submissions.	
Please note that lines 1NY to 4NY have the following	
equivalents in the latest issue of the PR24 business plan	
tables see - PR24 Final methodology submission tables and	
guidance - Ofwat & PR24-BP-table-guidance-part-1-	
OutcomesV4.pdf (ofwat.gov.uk):	
 Line 1NY – Total Household Consumption - OUT4.43 	
 Line 2NY - Average Household – PCC - OUT4.45 	
•Line 3NY - Total Non-Household Consumption - OUT4.70	
 Line 4NY - Total Leakage - OUT4.31 	
Please highlight any areas of uncertainty where you believe	
that companies may be taking different approaches.	

Appendix C: Independent Assurance Note

The following document was provided by Turner & Townsend following their review of our Consultation and Statement of Response development processes.

• Assurance note – BRL WRMP24 Statement of Response DRAFT

Background, scope and approach

Following the publication of your Bristol Water dWRMP24 in November 2022, you are currently due to publish a Statement of Response (SoR) by 26 May 2023 (note that since the assurance review this deadline has been extended to align with that of SWW to 15th August). Ahead of publishing that SoR, you asked us to undertake assurance that would inform the Pennon Board's view of the confidence it can take that the processes around your dWRMP24 publication, consultation and Statement of Response (SoR) have been completed appropriately and according to available guidance.

We agreed that to fulfil the scope above we would conduct two assurance review sessions with you covering:

the publication of, and consultation on, your dWRMP24 (including the publication and notification process; specific and general customer and stakeholder engagement; and queries on the plan); and

your development of your SoR (including whether you could demonstrate you had, alongside the technical consultant partners supporting you in developing your plan, given due consideration to the issues respondents had raised; whether there had been other changes during the consultation period; and your plans or otherwise for publishing a rdWRMP24).

In support of these sessions, you shared material before, during and after them. This included, for example: your dWRMP24 publication contact list; social media posts; and your response tracking file.

After both sessions we shared detailed feedback and actions with you. We summarise our observations in the following section.

Observations

The table below summarises our observations from the two assurance review sessions we held with your teams. We also note below it some additional comments relevant to either our review or to consider in relation to other long-term plans.

Assurance review session	Summary
dWRMP24 publication and consultation process	The team's publication and consultation process, as discussed during the audit, appeared consistent with the material aspects of the WRPG. We identified no material deviations, noting only a limited number of potential improvements to consider ahead of publishing the SoR and the eventual fWRMP24 (eg: including Ofwat queries from the consultation process, and the company's response, in the SoR).
Statement of Response development	The team appeared to be following a reasonable process to track issues raised in response to its dWRMP24 consultation, and to enable giving them due consideration in their resolution.
	From our discussions, we note there is scope for the team to consider how it will cover, reflect or clearly reference in the SoR some additional issues outside those specifically raised in consultation responses (eg: broad themes arising from its



	survey and webinar engagement exercises; AMP7 transition expenditure; knock- on impacts to and from the WRMP).

More widely, arising from our discussion of the dWRMP24 consultation process, we did observe potential to enhance the customer engagement process around your long-term/future plans by considering introducing explicit internal sign off that engagement material is a fair, balanced and accurate representation of the plan – and aligns to any applicable/relevant principles.

We also note that:

- the team's work in response to issues raised is still ongoing in several areas (eg: demand options) and will likely be so if the SoR is published in May 2023;
- there are still elements of uncertainty around the publication of the SoR, rdWRMP24 updates and rdWRMP24 tables, in relation to interaction with the regional plan for instance;
- we did not review the formal SoR document you propose to submit, as this was still in development at the time of our review; and
- we agreed that given the scope and timing of our assurance, the detailed technical appropriateness of any responses was a matter for your technical consultant partners (and ultimately your regulatory stakeholders) as you developed your plan further.

Conclusions

Based on our discussions with the team and consideration of materials shared around our assurance review meetings, we have not identified any material variation from the guidelines in relation to the dWRMP24 consultation process or the development of the SoR. The team appeared to be following a reasonable process to track issues raised in response to its dWRMP24 consultation, and to enable giving those issues due consideration in their resolution.

- Turner and Townsend
- 19 May 2023