Thames Water Draft Water Resources Management Plan 2024 Statement of Response

Appendix A: Response to Environment Agency Representations

August 2023

Introduction

The Environment Agency (EA) representation to the consultation on our draft Water Resources Management Plan (WRMP24) comprised three documents:

- Main representation - this document has five sections:
    1. Introduction
    2. Executive Summary
    3. Legal compliance – raises issues where the Environment Agency considers that Thames Water has not complied with the Water Resources Management Plan (England) Direction 2022.
    4. Recommendations – summarises actions that the Environment Agency recommend in order to ensure that Thames Water meets its legal obligations, secures supplies for its customers, protects the environment and meets government expectations.
    5. Improvements – summarises actions that the Environment Agency consider would be beneficial to Thames Water's WRMP
- Evidence Report – Appendix 1. This contains more detail regarding the recommendations and improvements summarised in the main representation.
- Minor Issues This report details minor issues which the Environment Agency consider do not pose a direct risk to the security of supplies or the environment however, resolving the minor issues identified will help improve presentational quality and/or customer understanding of the plan.

We have considered all of the points raised by the Environment Agency in relation to the draft Water Resources Management Plan. In this appendix we present a table in which we set out the points raised in the Environment Agency's representation, the evidence report and minor issues report.

We have copied the text from the Environment Agency representation, evidence report and minor comments report. In some cases, we have split the Environment Agency's points into further sub-points in order to limit the breadth of response required regarding individual points raised. This means that, in some cases, we have copied text from the Environment Agency's representation multiple times. In some cases we have amended the sentence structure where we have split consultation points raised into multiple points, but we have not changed the meaning of any points raised.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Introductory Remarks			
Intro 1	Thames Water must deliver its plan; a plan is nothing without delivery. Our assessments of Thames Water's WRMP Annual reviews show that the company needs to improve its leakage reduction, reduce its outage and deliver on its commitments. The company's draft WRMP24 plan indicates the company plans to improve in some of these areas however it must deliver on its plans; WRMP19 set out similar ambitions but has not delivered.	We recognise that we need to improve our performance on leakage and outage. Outage: The relatively high outage figures reported in the Annual Review are mainly due to the availability of the Gateway desalination plant. We have significant investment plans for this plant for AMP8 which we have shared with the Environment Agency through meetings and briefings. Leakage: We achieved our leakage target for several sequential years, including 2022, although the drought and freeze-thaw that occurred in the year 2022-23 were extremely challenging and caused higher levels of leakage, meaning we missed our target in 2022-23. We are focused on achieving the AMP7 leakage targets set out in WRMP19, and will keep this focus moving into AMP8. We will deliver our WRMP24. We are organised to deliver the new supply-side schemes set out in our WRMP24. The RAPID gated process has allowed us to complete the preparatory work and set up the appropriate arrangements to lead the consenting, detailed design and delivery of these schemes.	No changes - none requested

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Intro 2	A number of other water companies plan to use desalinated water for future water supplies. Thames Water already has this ability, however the company has not managed the asset well and this vital resource has not been working for many years. The company must either commit to improving the asset to ensure it is reliable for regular operation or decide to decommission and select a new option. The company cannot mishandle this asset when it provides crucial resilience to London in a drought.	As noted in the draft WRMP24, we have a programme of investment for the rest of AMP7 and AMP8 which will restore the capability of the desalination plant. We are committed to work openly and transparently with the Environment Agency, sharing information on the programme of work. We have incorporated the availability and forecast future capability of the Gateway desalination plant into our monitoring plan, in order to ensure that our plan is resilient.	We have provided an update on the progress and future programme of works to restore the capability of the Thames Gateway WTW in Section 4 of the WRMP. We have updated our monitoring plan between dWRMP and rdWRMP. It is set out in Section 11 and described in more detail in response to other consultation points.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Intro 2	The drought of 2022 has shown several issues with Thames Water's network. Action is needed to address the issues at its desalination plant. As described below, the company needs to decide whether it will continue in the long-term with this asset. The plan should be updated with the decision and any changes in deployable output.	We have a programme of investment set out for the remainder of AMP7 and for AMP8 which will bring a higher level of resilience to the desalination plant. To represent this in our WRMP we have set the current deployable output at 50Ml/d as an annual average, moving to 75Ml/d by 2030. This was included in our draft WRMP. As is required by the updated Water Resources Planning Guideline, we have reflected on the 2022 drought event and have written a 2022 drought appendix.	Between dWRMP24 and rdWRMP4, we have updated Section 4 of our WRMP to include commentary on our progress in restoring the capability and reliability of the desalination plant, and our plans for the remainder of AMP7 and AMP8. We have not updated our deployable output forecast for the Gateway WTW between dWRMP and rdWRMP, as it presents the best current view of expected outputs from our investment programme. Issues arising from the 2022 drought are addressed in Appendix CC of our rdWRMP24, a new inclusion when compared to dWRMP24.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Intro 3	Demand management alone will not be enough to ensure a secure supply of water. The company is planning to deliver a number of new supply schemes, including water recycling, transfers and a new reservoir. This increase in supply will provide better drought resilience for its customers, help it to adapt to climate change and support growing population and help the company reduce abstraction in places to improve the environment.	We agree with this point.	No change requested.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Intro 4	The company should ensure it continues to deliver on its previous commitments in WRMP19 to achieve improved resilience by 2030. This includes improvements to its network infrastructure and ensuring all assets are in the best condition, and are maintained.	Achievement of an increased level of drought resilience, a 1 in 200-year Level of Service by 2030, was contingent on the development of the Deephams water recycling scheme, as is set out in WRMP19. Further work and Environment Agency feedback led us to reject this option, and we do not have other options which can deliver the volume of water required by 2030. As such, we have had to revise our ambition for providing a higher level of resilience and we made this clear in our dWRMP. In our dWRMP, we set out a revised ambition for achievement of a 1 in 200-year Level of Service by 2030/31, a year later than our WRMP19. Between dWRMP and rdWRMP we have considered in more detail the consenting processes for options which could help us reach this higher level of resilience, and have considered the information needed to ensure that our plan provides Best Value and a high degree of resilience and so have further revised our commitment to a higher level of resilience. We will continue to take actions which will reduce overall demand for water, by reducing leakage and usage, which will help us to make incremental progress towards a higher level of resilience.	Between dWRMP24 and rdWRMP24 we have considered the feasible delivery timetable for the Teddington DRA and Water Recycling schemes. We have revised the date by which we consider 1 in 200-year resilience is achievable to 2033. As such, we have amended our baseline supply forecast (see Section 4 of our WRMP) and our investment programme (see Section 11 of our WRMP) to reflect an amended date for delivery of an enhanced level of resilience.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Intro 5	The drought of 2022 has shown several issues with Thames Water's network. Action is needed to improve its network operation around Farmoor reservoir to ensure its planned supplies are available when required	Agreed. Action is being taken to improve the network around Farmoor reservoir. The principal issue with network operation around Farmoor reservoir relates to the Faringdon to Blunsdon water main, which is being uprated. This work is on track to be completed by the end of December 2023. Our other supplies around Farmoor reservoir and in SWOX WRZ are available for supply.	Changes have been made to explain the action being undertaken to improve network operation around Farmoor. We have included a new 2022 Drought Appendix (Appendix CC) to our rdWRMP24, as is required by the Water Resources Planning Guideline. In this Appendix, we have included the following text which addresses the points raised: “Following the drought of 2022 Thames Water has considered the requirements in relation to its network operation around Farmoor and the principal issue with Thames Water’s network operation around Farmoor reservoir, which relates to the Faringdon to Blunsdon water main which is being updated. This work is on track to be completed by the end of December 2023. Our other supplies around Farmoor and in SWOX WRZ are available for supply.”
Intro 6	The drought of 2022 has shown several issues with Thames Water's network. Action is needed to improve asset health to reduce outage and improve operational resilience. Thames Water should demonstrate in its final plan how it will improve and maintain asset health to reduce outage	We have considered this and included as changes to the plan more explanation as to how we will improve and maintain asset health to reduce outage. This is contained in a new 2022 Drought Appendix, produced in accordance with the Water Resources Planning Guideline. Our 2022 Drought Appendix includes a review of our outage performance and forecasted outage	Our new 2022 Drought Appendix, Appendix CC, produced in accordance with changes to the Water Resources Planning Guideline made between dWRMP24 and rdWRMP24, includes comparison of our “outage allowance” and “actual outage”, and includes examples of actions being taken to reduce outage and improve operational

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		allowance. Solutions to issues identified during the drought are being scoped within our capital delivery and/or capital maintenance programme.	resilience, including those referenced above, Intro 2 and Intro 6.

Intro 7	Thames Water needs to do more to demonstrate that it is planning its 'environmental destination' quickly enough to meet regulatory and societal expectations. The draft WRMP24 sets out a positive plan. However further work is required to review the pace of delivery and demonstrate that final plan offers the best route to achieve sustainable abstraction as quickly as feasible. Some abstraction reductions are planned after the National Framework for Water Resources expectation of 2050. Planning to deliver after 2050 is unacceptable unless strong justification demonstrates that it is not technically feasible or affordable to deliver faster.	In our dWRMP, our preferred programme facilitated achievement of the "Enhanced" scenario of abstraction reductions set out in the National Framework for Water Resources, through our high environmental destination scenario. Noting that some abstraction reductions were included after the 2050 "backstop" date. We have considered feedback received from the EA and Natural England that it is not acceptable to plan for Environmental Destination reductions to be made to be after 2050, and as such we have moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario, meeting the National Framework for Water Resources expectation. Alongside ensuring compliance with guidance, we have also considered whether there are opportunities to accelerate the process of investigation, identification of required abstraction reductions, design and implementation of solutions, and we have considered whether we could adapt our schedule of licence reductions. We do not consider that applying a fractured approach to delivering the programme of reductions sooner than this revised schedule would present best value to customers, because of the need for significant replacement resources and replacement infrastructure to enable reductions to be made for both London and the Thames Valley. Therefore, we do not consider it realistic to plan for a programme of reductions that would be quicker than that set out in our revised draft plan. We consider the process of investigation to establish	Changes made are as follows: We have altered the profiles of some licence reductions used as input datasets in our WRMP. This is presented in Section 5 of the WRMP. The main changes are: - Advancement of the timing of reductions at Lower Lee and NNRWs from 2060 to 2050, to comply with the 2050 date requirement. - New Gauge DO reduction moved from 2060 to 2050, to comply with the 2050 date requirement - Advanced timing of reductions at Farmoor and Ashton Keynes from 2050 to 2040, with justification given in Section 5. - Epsom reduction moved back from 2030 to 2035 in response to EA feedback on draft WINEP. In Section 5 of the rdWRMP we have included additional discussion of the assessment of feasible timescales for implementation of licence reductions.

		need, design of solution to assess cost-benefit, followed by implementation to be very important, and the timescale set out in our revised draft plan would allow for this.	

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Intro 8	Thames Water faces some of the biggest challenges of any company in England. This requires some difficult decisions, especially with its proposals for a number of strategic resource options. The plan belongs to the company, so Thames Water must justify it is making the right decision, especially when the schemes the company proposes carry substantial risk. We acknowledge alternative schemes would cost more, but the company needs to consider whether the short-term costs are outweighed by better long-term benefits.	We agree that we face significant challenges in the South East and need to make decisions to ensure a secure and sustainable water supply. We believe our draft WRMP addresses those challenges and sets out the decisions in a clear and understandable way, and that alongside our neighbours, we have proposed and justified a) that the preferred programme meets the challenges and b) demonstrates how the plan is adaptive should the future be different. The regional planning process examines the question of upfront or deferred investment. We recognise the appetite of some stakeholders and customers to act quickly, whilst others have expressed concerns about affordability. We are cognisant that the plan needs to be weighed against bill impacts. We believe our draft plan strikes an appropriate balance of those views.	We are confident that the approach and decision making to derive the best value plan for our draft WRMP is robust, we have reviewed and changed some of the input data and assumptions in response to representations raised to our dWRMP, changes to the Water Resources Planning Guideline, and new information. Changes made to input data have resulted in changes to our plan. The justification for our revised draft plan is set out in Section 10 of our rdWRMP24.
Recommendation 1: Manage the risks in the first five years of the plan, including the River Thames flood reduction scheme, desalination operability and demand management deliverability.			

Issue 1	Recommendation 1: Manage the risks in the first 5 years of the plan, including the River Thames flood reduction scheme, desalination operability and demand management deliverability. The company's plan contains a number of significant risks at the beginning of its plan, including the omission of the impact of the proposed River Thames flood reduction scheme on its Lower Thames abstractions, desalination operability (Recommendation 5), and heavy reliance on its demand management programme (Recommendation 2). The company should clearly identify, monitor and manage these risks. It should set out clearly what alternative options it has available and ensure these are ready to deliver if needed.	We recognise that there are risks and uncertainties at the beginning of our planning period, including those which are highlighted in this consultation response. Our monitoring plan in rdWRMP24 Section 11 includes discussion of these. Our preferred plan is one which is suitable for providing resilience to currently identified risks, and which presents Best Value for our customers based on the best information we have available at the moment. It must be borne in mind that we include a "Target Headroom" allowance which is greater in the near-term forecast period than it is in the base period. Our aim in using Target Headroom is that, in each reporting year, we would aim to have the same level of headroom as the "Base Year" headroom. The amount of Target Headroom above the "base year" allowance should be seen as a "forecasting supplement", rather than an ambition that we plan to have a larger target headroom buffer in the future. As such, Target Headroom being larger in the forecast period than the base year gives some resilience to uncertainty. However, our assessment is that the risks and uncertainties which exist in the short term could exceed the "forecasting supplement" element of our Target Headroom, and so, as described in detail in the main Statement of Response document, we have adopted a monitoring plan and 'preferred' and 'alternative' plans for the short-term.	Section 11 of our revised draft plan includes changes to our monitoring plan, which now considers these risks in detail. For the short term the monitoring plan sets out four key risks: - Lower Thames abstraction capability - River Thames Scheme (flood alleviation scheme in the Lower Thames) - Desalination plant capability - Achievement of leakage reduction From these four key risks come two key investment decisions: - Whether a solution is needed to maintain our currently stated Deployable Output for the London WRZ, accounting both for issues identified in the 2022 drought and exacerbation of these issues by the River Thames Scheme. - Whether the Best Value solution for the provision of 1 in 200-year resilience is the Teddington DRA scheme (which is significantly cheaper than alternatives, but which has a maximum size with no modularity, has faced significant local opposition, requires further work to confirm environmental acceptability and the resilience in respect of the Lower Thames abstractions the scheme, or the Beckton recycling scheme (which is around three times more expensive than the Teddington DRA, potentially faces similar questions over its environmental acceptability and which relies on an

			even higher level of treatment, reverse osmosis processes, which are the same technology as the desalination plant which we know are difficult to maintain when operated on an infrequent basis, but which is modular and could be increased in size up to 300 Ml/d) In our monitoring plan, we describe the need to: - Conduct research and modelling regarding the Lower Thames to identify whether a solution is required, and determine the impact of the River Thames Scheme on our drought risk, determine whether a solution is required and, if a solution is required, identify the Best Value solution - Monitor our progress in improving the capability and resilience of the Gateway desalination plant and forecast a reliable capability for the plant going forward - Monitor our progress and quantify the degree of risk associated with reducing leakage The outcome of our monitoring, in terms of adopting of our preferred plan or alternative plan, is detailed in Section 11 of the rdWRMP.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 1.1	Issue 1.1 Risks at the beginning of the plan such as River Thames Scheme impact, desalination operability difficulties or demand savings failing to deliver at the pace planned would leave the plan with a shortfall at the beginning of the planning period without having clearly identified alternative options. These risks do not appear to have been adequately considered within the plan, and therefore pose a potential risk to security of supply in the short-term. Thames Water should: • undertake further sensitivity tests to identify whether any alternative options are needed to ensure security of supply should these risks materialise • outline the alternative options and identify triggers for when decisions on these options may be required to ensure that the plan can adapt in the early years should the risks materialise	We recognise that there are risks and uncertainties at the beginning of our planning period, including those which are highlighted in this consultation response. As described in response to Issue 1, we have adopted 'preferred' and 'alternative' plans, with a decision regarding which is to be followed made in following learning and investigation. We have extended the range of sensitivity tests undertaken in deriving our preferred and alternative programmes.	Please see response to Issue 1. We have included details of sensitivity tests undertaken to derive our preferred and alternative programme in Section 10 of the rdWRMP.
Recommendation 10: Ensure that all transfers are aligned with neighbouring companies			
Issue 10	Recommendation 10: Ensure that all transfers are aligned with neighbouring companies. We have identified a number of discrepancies with transfers between Thames Water's and its neighbouring companies.	Thank you for highlighting inconsistencies in the representation of transfers between our draft WRMP and those of other companies.	Changes to the WRMP, including options considered and transfers presented in WRMP Table 1, are discussed in response to the more detailed sub-points raised.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 10.1.1	All transfers should align between donor and recipient companies including New Applicant and Variant water companies (NAVs). A number of discrepancies were identified within Thames Water's planning tables: • within Table 1g which details potable water transfers between Thames Water and other water companies; Thames Water has stated a transfer of 27.3 Ml/d between Affinity named "Fortis Green", whereas Affinity has stated this transfer has annual limit of 12 Ml/d. It appears Thames Water has reported the transfer significantly higher than the corresponding water company's dWRMP Thames Water should: • review the transfer named "Fortis Green" with Affinity Water to ensure it represents the annual limit, ensure any changes to the transfer annual limit are included with the WRZ supply forecast model	The inconsistency in relation to the Fortis Green transfer between Thames Water and Affinity Water and is due to inconsistency between the transfer's contractual terms and operational capability. The contract between Thames Water and Affinity Water is for a 6 million gallon per day (27.3 Ml/d) transfer. However, infrastructure constraints exist on the Affinity Water network which limit the amount of water that can be taken to approximately 12 Ml/d. As such, we consider that representing the transfer in Table 1 as being for up to 27.3 Ml/d is correct for Thames Water, as Affinity could (without notice to Thames Water) make infrastructure upgrades to enable them to take the contractual 27.3 Ml/d. As such, this inconsistency is not necessarily indicative of a mistake on either side. In the Water Resources South East plan, the Fortis Green transfer is represented as being flexible in its capacity, reflecting clauses in the contract which allow for its cancellation or amendment should both parties agree. We confirm that Thames Water and Affinity Water have reviewed the point and have accounted for the transfer consistently in our supply-demand balance tables in the revised draft WRMP.	We have not made any changes to our WRMP following this response point as our consideration is that the Fortis Green transfer is represented correctly for our company.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 10.1.2	All transfers should align between donor and recipient companies including New Applicant and Variant water companies (NAVs). A number of discrepancies were identified within Thames Water's planning tables: • within Table 5 of Thames Water's planning tables, which details the option benefits for each plan. Table 5 contains details of a preferred transfer option "Wessex Water to SWOX Transfer (Flaxlands)" that is not present or selected within Wessex Water's dWRMP. Thames Water should: • review the preferred option named "Wessex Water to SWOX Transfer (Flaxlands)" present in Table 5 with Wessex Water to ensure the transfer is agreed between the two parties, the benefits across the planning period match and are reflected in both companies' dWRMP's. If any changes are required, ensure Table 4 is updated to reflect the changes made to Table 5	We have reviewed to ensure that transfers align across company plans in terms of option feasibility and environmental assessment. This has resulted in us rejecting the Wessex to Flaxlands option because Wessex Water have confirmed that it is no longer available. This is reflected in our option list and the information we have provided to WRSE to inform the investment modelling for the revised draft plan.	The Wessex to Flaxlands option has been rejected and this has been reflected in Section 7, Appendices P, Q and R.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 10.1.3	All transfers should align between donor and recipient companies including New Applicant and Variant water companies (NAVs). A number of discrepancies were identified within Thames Water's planning tables: • within Table 5, WRZ level Options benefits of the planning tables, a discrepancy has been identified with one of the preferred options a "Lower Thames Reservoir Transfer 2a 100 Ml/d to New Iver 2 WTW Phase 2". This preferred option has potentially been assigned an incorrect 'Option Type', as it has been listed as an internal transfer whereas the "Lower Thames Reservoir Transfer 2a 100 Ml/d to New Iver 2 WTW Phase 1" has been listed as an external transfer Thames Water should: • review the 'Option Type' for the preferred option "Lower Thames Reservoir Transfer 2a 100 Ml/d to New Iver 2 WTW Phase 2" and amend the 'Option Type' as necessary. Table 4 should also be updated with any changes to the 'Option Type'.	We agree. The "Lower Thames Reservoir Transfer 2a 100 Ml/d to New Iver 2 WTW Phase 2" option type has been amended to "External raw water bulk supply/transfer" in the WRMP data tables.	The WRMP data tables 4 and 5 have been changed to illustrate that the "Option type" for the "Lower Thames Reservoir Transfer 2a 100 Ml/d to New Iver 2 WTW Phase 2" is "External raw water bulk supply/transfer".

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 10.1.4	Thames Water should work with relevant water companies including the NAVs to ensure that size and timing of transfers align between the plans	We have ensured that the transfers to NAVs included in our WRMP ensure that our demand forecast is reliable, rather than representing them as though they were bulk supplies. Our assessment of the supply-demand balance impact of transfers to NAVs begins with the consideration of transfers required to meet current demand levels (uplifted to a dry year). Further transfers to NAVs would be dependent on additional growth, which would be factored into our demand forecast. As such, representing the contracted bulk supplies to NAVs would not give us an appropriate supply-demand balance impact forecast	We have not made changes to our WRMP as we consider that our representation of NAVs is appropriate for our WRMP.
Recommendation 11: Review the integrity of the London water resource zone to ensure that all customers are facing approximately the same risk			

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 11	Recommendation 11: Review the integrity of the London water resource zone to ensure that all customers are facing approximately the same risk. The 2022 drought highlighted that there are some issues transferring water between east and west London.	We agree that addressing this point in our rdWRMP is important. Work is underway to review the risk in the Lower Thames with regard to the disparity experienced between north and west London in 2022. One of the key challenges is that there appeared to be more water available downstream of Shepperton Weir than upstream of this point, while the majority of our abstraction and storage assets are upstream of this point. A section in the 2022 Drought Appendix sets out these challenges. We are reviewing our understanding of the river flows and level management as well as any learning on our abstraction management. These learnings are likely to inform the need for both short-term and long-term solutions, as-well as informing any future updates to our water resources modelling and a review of London's WRZ integrity.	We have included a 2022 Drought Appendix in the revised draft plan in line with the updated WRPG. The appendix includes a review of the risks in the Lower Thames and any updates to our resilience planning and modelling as a result, along with highlighting the need for further investigation. Our monitoring plan in Section 11 of the rdWRMP has been revised between dWRMP and rdWRMP to include detail of actions we will take according to these further investigations.
Issue 11.1	The drought of 2022 has shown several issues with Thames Water's network. Action is needed to identify any short-term improvements to increase resilience to droughts, especially after the drought it experienced in 2022. The company should describe how it plans to build resilience in the eastern part of London. It may need to consider splitting the zone in two within its plan to ensure there are no sub-zonal deficits.	We agree that addressing this point in our rdWRMP is important. Work is underway to review the risk in the Lower Thames with regard to the disparity experienced between north and west London in 2022. One of the key challenges is that there appeared to be more water available downstream of Shepperton Weir than upstream of this point, while the majority of our abstraction and storage assets are upstream of this point. A section in the 2022 Drought Appendix sets out these challenges. We are reviewing our understanding of the river flows and level management as well as any learning on our abstraction management. These learnings are likely to inform the need for both short-term and long-term solutions, as-well as informing any future	We have included a 2022 Drought Appendix in the revised draft plan in line with the updated WRPG. The appendix will include a review of the risks in the Lower Thames and any updates to our resilience planning and modelling as a result. We have not separated London into two WRZs, as we remain assured that the Thames Water Ring Main (TWRM) provides integrity to the London WRZ by allowing treated water from our Large Processing Plants (LPPs) to be distributed around the network.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		updates to our water resources modelling and a review of London's WRZ integrity. Appendix CC of the rdWRMP describes why we do not think it appropriate to split London into multiple WRZs.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 11.1	During the drought of 2022, concerns were raised regarding the integrity of the London Water Resource Zone (WRZ) and the ability to balance the use of reservoirs to meet demand, which saw the west London reservoirs at much lower levels that the east. London WRZ integrity should therefore be reviewed in light of the performance during the 2022 drought as the risks to the customers were different and should therefore be reflected in the company's assumptions. Appendix I.31 states that in the past London WRZ was made up of three separate WRZs but the Ring Main has allowed them to function as one. The water is transferred from west to east, however, this is in contrast to the observed levels within the reservoirs with lower volumes in the west compared to the east of the WRZ. Thames Water should: • undertake a review of WRZ integrity for London to ensure that all customers within the London WRZ carry the same risk of security of supply • update the modelling to ensure that Water Resource Modelling System modelled representation of Upper and Lower Thames reservoirs aligns with the observed during the 2022 drought	We agree that addressing this point in our rdWRMP is important. Work is underway to review the risk in the Lower Thames with regard to the disparity experienced between north and west London in 2022. One of the key challenges is that there appeared to be more water available downstream of Shepperton Weir than upstream of this point, while the majority of our abstraction and storage assets are upstream of this point. A section in the 2022 Drought Appendix sets out these challenges. We are reviewing our understanding of the river flows and level management as well as any learning on our abstraction management. These learnings are likely to inform the need for both short-term and long-term solutions, as-well as informing any future updates to our water resources modelling and a review of London's WRZ integrity. Appendix CC of the rdWRMP describes why we do not think it appropriate to split London into multiple WRZs.	We have included a 2022 Drought Appendix in the revised draft plan in line with the updated WRPG. The appendix will include a review of the risks in the Lower Thames and any updates to our resilience planning and modelling as a result. We have not separated London into two WRZs, as we remain assured that the Thames Water Ring Main (TWRM) provides integrity to the London WRZ by allowing treated water from our Large Processing Plants (LPPs) to be distributed around the network. Our improved monitoring plan, discussed in reference to Issue 1, sets out the work that is being programmed in deal with short-term risks and uncertainties, including issues in the Lower Thames.

Issue 11.2	In Section 7, additional resilience options required to support the development of resources are identified. There is significant uncertainty around which reinforcement options are required, as the source and demand development will result in different reinforcement options being developed. The options listed appear to be very limited and do not consider the known limitations of the existing system at times of low flow and high demand. For example, for all the resource options potentially being developed such as improved network interconnectivity has been identified as critical for resilience, particularly following the 2022 drought event. This may take a number of forms, for example, better west London reservoir interconnectivity, more abstraction flexibility from the Thames, Lee Valley chain reservoir interconnectivity to enable more effective Thames Lee Tunnel transfer, inter-resource zone connectivity are all reinforcement options that are necessary to ensure system resilience. Thames Water should ensure the plan includes development of system resilience options to be delivered rapidly and in addition to the options that are necessary to support and enable resource development. These options should be developed following learning from the 2022 drought event as well as general network management.	In Section 7 we have set out the potential system reinforcements that may be required for raw water systems, water treatment works and network reinforcement. Some of these system reinforcements are linked to specific water resource options, e.g. the tunnel from Beckton to Coppermills WTW for blending of water from Beckton and Crossness desalination options, whereas other reinforcements are dependent on the combination and quantum of new water resources. For example, the increased abstraction capacity on the River Thames is dependent on the amount of additional water that is available in the River Thames from new reservoirs, transfers and licence trading. The 2022 drought provided an insight into our ability to abstract at our abstraction points along the Lower Thames under dry weather conditions. The experience of the 2022 drought indicated that operational constraints on abstraction from the Lower Thames may not align with our WRMP modelling assumptions, with abstractions upstream of the Thames' confluence with the Wey being significantly limited last year. Since then, we have carried out further work that suggests we need a detailed study of the lower Thames to ensure we are representing the water availability correctly under drought conditions. We have identified a new Lower Thames Abstraction with connectivity to one of our west London reservoirs as an indicative, potential solution and this is included as a system reinforcement option in our revised draft WRMP24.	An expanded range of system resilience options have been considered in rdWRMP24. These are detailed in Section 7 and Appendix R. As discussed in reference to Issue 1, we have set out a programme of investigation which we believe is required before determining the system resilience options that are required.

		Further investigation into the 2022 drought and assessment of potential options to address the operational constraints, including west London reservoir interconnectivity and abstraction flexibility from the Thames, is needed to identify the preferred solutions, it is not possible for this to be completed in time to be included in the rdWRMP24. We have also undertaken modelling of the raw water systems to assess the potential benefits of extending the Thames Lee tunnel transfer to provide additional support for the Lee Valley reservoirs. This modelling has shown that there is only a very small benefit in constructing this tunnel independently of Beckton recycling. We have considered both inter-zonal resource transfer options and inter-company transfers, details of the transfers are included in are Constrained List can be found in Appendix R.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Recommendation 12: Provide clear thresholds and triggers for the company's monitoring plan.			
Issue 12	Recommendation 12: Provide clear thresholds and triggers for the company's monitoring plan. Clear thresholds and triggers are essential to show when a company would switch to an alternative set of options in its adaptive plan.	We recognise that the monitoring plan developed for the dWRMP was not sufficiently detailed and have improved this for the rdWRMP.	We have improved our monitoring plan between dWRMP24 and rdWRMP24. In rdWRMP24 Section 11, we set out in detail our proposed monitoring plan. This includes thresholds and triggers which we will monitor against, to define when we may switch to an alternative plan.
Issue 12.1	We are pleased that Thames Water has included a monitoring plan setting out the metrics that will be monitored to understand whether changes are required in the adaptive plan. However, there is a lack of detail regarding what the thresholds would be to trigger a change to the plan, and how these inform the decision points. It is also not clear how the monitoring plan will feed into the regional monitoring plan. Thames Water should: • outline the thresholds that will trigger a need to adapt or move to a different pathway • clarify the interaction and alignment with the WRSE regional monitoring plan • demonstrate that the monitoring plan has clear links to decision points • set out how any changes within the	We acknowledge that the monitoring plan set out in our dWRMP was not sufficiently detailed. We note the specific points raised which we will incorporate in revisions to the draft plan. We note, however, that we cannot define specific observation thresholds for individual metrics which would cause us to alter our plan, because: - Our planning must forecast supply-demand balance need, as interventions take time to develop. As such, thresholds for plan changes involve both observation and forecast - Our plan must consider combinations of different factors. Combinations of observations and forecasts of climate change impact, demand, and licence reduction need will be required to make decisions	We have improved our monitoring plan between dWRMP24 and rdWRMP24. A more detailed monitoring plan is included in Section 11 of the revised draft plan. This includes consideration of thresholds and triggers which would cause us to adopt alternative plans.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	AMP8 or AMP9 planning cycle will be taken account of and how the plan can adapt. This links to the reliance on demand reductions outlined in recommendation	Our consideration is also that our monitoring plan should not extend beyond WRMP29, as at this point we will be required to produce a new WRMP.	
Recommendation 13: Justify the climate change scenario used and how this has been accounted for in uncertainty			
Issue 13	Recommendation 13: Justify the climate change scenario used and how this has been accounted for in uncertainty	We are grateful for the specific and helpful feedback received with respect to climate change impacts. We have answered the individual points raised.	Changes made are discussed in reference to individual points raised below.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 13.1	Section 4.160 of the Supply Forecast states that for the London WRZ the median impact of climate change on deployable output of the 28 calculated values, from iteration 1 is -136.7 Ml/d. This median was taken as the central impact of climate change in 2070, however, Appendix U.84 details the median impact of the 1 in 500 year deployable output across the WRZs, reporting London's median impact as -110Ml/d in the plan. The scaling factor provided in Table U-6 does not seem to appropriately scale the former to the latter. Furthermore, 7.1BL of the Baseline DYAA planning table reports climate change impact on deployable output at approximately 168 Ml/d, the high scenario based on CC_06. Thames Water should: • clarify the differences between the two quoted median impacts in the plan and how the scaling based on the two iteration approach has been applied • clearly explain how climate change uncertainty has been included in the plan and the impact of climate change on deployable output in each of its zones.	As per our dWRMP24 Appendix U, two scaling factors are applied in converting values taken from modelling of the 28 spatially coherent projections to values aligned with the probabilistic projections. These are presented in dWRMP24 Tables U-6 and U-7, with these two scaling factors combined in Table U-8. The figure in Table U-8 contains the overall scaling factors which are applied. As described in Section 6 of the WRMP, we have adopted a "High" climate change scenario later in our WRMP planning period. The choice of a "High" climate change scenario was based on a need to align with the "High" Environmental Destination forecast and a limitation in the number of branch points that could be adopted in our adaptive plan. This explains the difference between the quoted median value and the value presented in the dWRMP24 tables. The abstraction reduction scenarios set out in Appendix 4 of the National Framework for Water Resources include climate change impacts consistent with a severe climate change projection (see p.20 of Appendix 4 of the National Framework for Water Resources). As such, our consideration is that it is consistent to align the "High" environmental destination scenario (developed to comply with the scenarios from Appendix 4 of the National Framework for Water Resources) with the "High" climate change scenario. Our approach to considering climate change	As noted, our consideration is that the presentation of climate change impacts in our WRMP is comprehensive and correct. Appendix U of the WRMP provides the information requested.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		uncertainty is explained in Section 6 and Appendix U of the WRMP.	

Issue 13.2	Thames Water has planned against a high climate change scenario (RCP8.5) and identified a 'central' value from the climate change distribution within this scenario. This is at the upper end of the climate change scenarios, however, explanation for why this has been chosen for the preferred plan is not provided. Thames Water should provide further justification for planning to RCP8.5 in its preferred plan to provide assurance that this is a reasonable assumption.	Our dWRMP24 preferred plan follows a path in which we initially use the median climate change impact from the scenarios modelled and then adopt a 'high' scenario from 2040 onwards. Our adaptive plan also incorporates consideration of a 'low' scenario. We have conducted modelling using probabilistic projections from RCP2.6, RCP4.5, RCP6.0 and RCP8.5, as well as the 28 spatially coherent projections (RCP8.5), all using UKCP18 data. This has involved consideration of a total of over 3000 climate change scenarios. The profile of values adopted for the median scenario is calculated by finding the median impact of the 28 spatially coherent projections, and scaling the value found by the ratio of the median of the RCP8.5 probabilistic projections to the median of the 28 spatially coherent probabilistic projections. The value used in this scenario thus represents the 50th percentile of the RCP8.5 probabilistic projections. This is also approximately equal to the 50th percentile of all projections considered. The profile of values adopted for the 'high' scenario is calculated using the 'CC06' scenario (one of the 28 RCM projections). This scenario is approximately a 75th percentile value of the 28 RCM projections (RCP8.5). We have then scaled this value by the ratio of the median of the RCP8.5 probabilistic projections to the median of the 28 spatially coherent probabilistic projections. The resultant value is approximately a 75th percentile value of the RCP8.5 probabilistic projections (and is approximately a 75th percentile value of all scenarios modelled).	Between dWRMP24 and rdWRMP, we have added content in Appendix U and Section 4 of our rdWRMP which makes the same point as here in the SoR, i.e., that while we have used scenarios from RCP8.5, the range of scenarios considered is representative of the whole range of projections from UKCP18. We have therefore not changed the scenarios adopted in our planning.

		The scenario that we have adopted as a 'low' scenario is selected as approximately a 10-15th percentile of the spatially coherent projections. We have then scaled this value by the ratio of the median of the RCP8.5 probabilistic projections to the median of the 28 spatially coherent probabilistic projections. The resultant value is approximately a 25th percentile impact across the full range of projections modelled. As such, this response demonstrates that we have considered scenarios which are approximately the 25th, 50th, and 75th percentile impacts calculated when considering all emissions scenarios across the UKCP18 data. While each scenario comes initially from an RCP8.5 output, we have mapped these scenarios to the wider range of UKCP18 data available and have demonstrated that use of RCP8.5 has not biased our modelling.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 13.3	The plan's narrative states that as uncertainty is expressed through the adaptive planning scenarios, uncertainty due to climate change impact is excluded from target headroom from 2040. It appears that this has been presented in the accompanying WRP tables (lines 46 BL and 46 FP), where a value of zero has been entered for climate change uncertainty. This is logical for avoiding double counting, however, as the plan's document and tables only present the preferred plan, the approach considering uncertainty factors in the data tables through adaptive planning is not clear. In Appendix U.111 it states, 'Uncertainty around the median climate change forecast is included in Target Headroom.' Monte Carlo sampling used 1 randomly selected scenario of the 28 climate change scenarios and included an allowance for the variance of the deployable output impact for that scenario compared to the median value. Table U-9 shows the contribution of climate change towards target headroom. Thames Water should present a clear narrative and further evidence of how climate change impacts on both supply and demand, and the level of uncertainty, are accounted for through the adaptive pathways/situations, for the entire planning period. The company should:	As identified in this representation, climate change uncertainty (supply-side and demand-side) is considered in Target Headroom for the period up until 2040. From this point onwards it is removed from Target Headroom to avoid the risk of double counting. This is explained in Appendix U of our WRMP. We consider that adequate explanation of the WRSE Climate Change and Target Headroom methodologies is provided in Appendix U and Section 6 of our WRMP. Narrative and data tables align for climate change impact. Table U-9 in the dWRMP and rdWRMP shows 0 climate change contribution towards TH from 2040 onwards, and this is described in paragraph U.111 (dWRMP, now U.115 of the rdWRMP). Table U-10 (dWRMP and rdWRMP) shows the total impact of climate change on the supply-demand balance.	Our consideration is that clear explanation of the items listed is given in our dWRMP and so we have not made changes following this comment.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	• summarise the WRSE climate change methodology and its integration in adaptive planning, to provide the clarity and assurance that climate change impact is adequately considered for the plan, and WRSE methodology is fully adopted. • ensure that the data within the planning tables and in the plan narrative align		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Recommendation 14: Explain how the Strategic Environmental Assessment (SEA) has influenced the selection of options and ensure that transboundary effects have been properly considered.			
Issue 14	Recommendation 14: Explain how the Strategic Environmental Assessment has influenced the selection of options and ensure that transboundary effects have been properly considered. The Strategic Environmental Assessment should also cover the length of the plan and provide clarity on how mitigation measures will be applied to address potentially significant adverse effects.	(See Issue 14 sub-points)	(See Issue 14 sub-points)
Issue 14.1	It is not clear how the SEA findings have influenced the selection of options at company level and there is no comparison of options. The development of alternative options and link back to the individual options assessments presented within the WRMPs is not easy to follow and requires further clarification to fully understand what options are to be taken forward and why. The lack of detail on the alternatives considered and justification for selection/not being taken forward means that the SEA does not meet the requirements of the SEA regulations to justify reasons for selecting reasonable alternatives considered and to evaluate their likely significant effects. Thames Water should explain within its	We have included a comparison of options with regards to SEA performance within the SEA tables in our dWRMP24 SEA report. This SEA report includes information on the different ways in which the SEA process followed has influenced the selection of options and the plan both at regional and company level. We have added further detail within our rdWRMP24 SEA report to provide more information on this, including further information on how the SEA has influenced how we view individual options at a company level and the how the SEA process has influenced the selection of our BVP in preference to alternative plans.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	Environmental Report how the SEA findings have influenced the selection of options and provide further justification for the alternatives that have been selected.		

Issue 14.2	The application of the method to assess likely significant effects of options and omission of transboundary effects poses a compliance risk and could mean that there are significant effects that haven't been identified within the SEA. Annex F sets out the likely significant effects (positive and negative) of the assessment of options, however, these provide a very high-level overview and don't provide description of effects. Despite some of the characteristics of effects being defined within the methodology, it doesn't appear that these have been carried through into the assessment. Further details on the assessment of options have been outlined within Section 4. This has broken down each of the options and provides an overview on the potential effects, including potential sensitive receptors. For some options the details on effects are limited, and it is not clearly explained what the implications are. For example, for the Henley to SWOX option it simply states 'the SEA identified that this option could have moderate negative residual construction effects on material assets'. Section 4 states 'the effects of each option were assessed premitigation and post-mitigation (residual effects)'. From the assessment findings it is not clear what are the pre or post mitigation effects as the option assessments findings presented in Annex F differ from those presented within the main environmental	In response to feedback received, we have reviewed our SEA report for structure and clarity to make the report easier to navigate. In the example given (Henley to SWOX), the conclusions in our dWRMP24 Appendix B (SEA report) Annex F (SEA tables) do agree with the assessment conclusions in the main body of the report, being that moderate negative residual (i.e. post-mitigation) effects are expected on material assets due to the construction activity associated with this option. We do appreciate that this could have been made more explicit, and have reviewed the SEA report (including Section 4) with this in mind. We have included further detail on the SEA assessment for each option within the SEA report, to make the process followed and outcomes clearer, including descriptions of effects and characteristics of these. We consider that we have covered transboundary effects within our dWRMP24 SEA, for example as several SRO options go beyond the Thames Water area and the entirety of the scheme has been assessed. We appreciate that there are areas where further collaboration with other water companies was needed to align assessments and identify cross-company cumulative effects accurately - we have now completed this. The content regarding the results of WRMP19 SEA assessment hase been removed to make the report clearer for readers.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B

	report. This highlights some key inconsistencies between documents. Further findings are presented in Annex G - SEA Options Assessments (WRMP19), but these are from the current WRMP, although there is some overlap in options selected as part of the WRMP24. These are presented differently again, they do not use symbols or numerical values as set out in the methodology, but colour coding. No key has been provided. It's difficult to make comparisons between the findings of WRMP19 and WRMP24, which brings into question its inclusion altogether. Overall, due to the confusion surrounding the reporting of effects, it is difficult to assess whether all effects have been correctly identified and we believe that there is potential for the plan to give rise to significant (positive and negative) effects. Transboundary effects have not been identified anywhere within the SEA which is a clear omission. Thames Water should: • Improve the clarity of the assessment of options within Section 4 of the SEA. It should outline what effects are pre/post mitigation • ensure that the proposed method is clearly pulled through into the assessment of options. This includes identifying effect characteristics • provide further clarity in the SEA environmental report to demonstrate no significant transboundary conflicts or		

	issues that could affect the approval and adoption of the WRMP has been included • consider whether WRMP19 findings should be included within the environmental report annexes. It currently has no explanation as to why the WRMP19 findings have been included, reducing the clarity of the report, particularly the difference in effects reporting		

Issue 14.3	Section 5.1 of the Technical Appendix B - SEA sets out how the options developed by Thames Water have fed into the regional planning process and sets out the three key stages where the SEA has fed into the process. However, there are stages within the report, particularly surrounding the assessment of alternatives options, where it's not clear how the SEA has influenced the plan. Whilst this may have been the case it has not been clearly evidenced within the environmental report narrative. There is a heavy reliance upon the regional plan which often makes it difficult to decipher whether the SEA has had significance influence on the WRMP at the local level. The assessment of alternatives is set out in Section 5. This section is quite confusing and isn't easy to follow, as a lot of the work has been deferred to the regional level, it is also not clear as to whether local plan level alternatives have been assessed. The SEA assesses both a least cost and best environmental and societal plan alternatives. The summary provided in Section 5.8 provides an overview of the alternatives assessed and it does outline clear findings as to why the best value programme is the preferred approach. It also draws upon findings from the Habitats Regulation Assessment, Invasive Non-Native Species and WFD assessments. Feasible options (long list options) have been assessed, but it is not	In response to this feedback, within the SEA report we have made it clearer as to how we have assessed the plan against our local baseline and the results of this, to make more explicit how the SEA at a local level has influenced our company level plan. We have also made it clearer (via additional detail) where our environmental assessments have led to rejection of options, as well as how the SEA assessment of our options has informed their selection via the WRSE investment modelling process. This is included in Section 9 of our revised draft plan. Within the SEA and other assessments for our draft plan, as a company we assessed both the options and in-combination/cumulative effects of Situation 4 of the WRSE Best Value Plan, Least Cost Plan and Best Environment and Society Plan, as relevant to Thames Water, as this forms our company plan. This approach ensures that WRMPs are consistent across a given region, which is one of the main aims of regional planning. We have followed the same approach for the revised draft plan. We have made it clearer within our plan as to which options we would consider feasible alternatives to those included in the preferred programme and described this within Section 10, and have provided commentary as to their anticipated environmental effects in Appendix B of the revised draft plan. Within our draft plan within our SEA report we included specific text on how the SEA has	Changes made to our plan are as described in our consideration. See rdWRMP24 Sections 9 and 10 and Appendix B

	clear from this assessment what the preferred options are in light of this assessment. Annex F presents 'A summary of the options selected within the BVP, LCP and BESP'. There are duplications of options across plan alternatives for example Deepham Reuse. It's not entirely clear whether alternative/feasible options to those included within the preferred plan have been assessed or how the preferred options that make up the preferred plan have been derived. Although plan alternatives have been assessed, it doesn't appear that option alternatives have been assessed as part of the SEA. It is not clear how the preferred options have been selected in light of other option alternatives. Thames Water should: • consider the recommendation of a separate section within the environmental report that sets out how the SEA has influenced the WRMP • undertake an assessment of alternative options and present the results so it is clear how the preferred options have been derived	influenced our WRMP; within our revised draft plan we have made this clearer.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 14.4.1	The Study area has not been defined within the environmental report, however, Section 4.3 'Option Assessment Methodology' states that 'a variable zone of influence was determined (ZoI) for each topic'. Some key receptors and assets were only considered if there was a direct intersection such as allotments and woodland, other key receptors and assets were considered within 500m of the option works location in the assessment. The exception to this was European and National ecological designated sites', which were considered by identification of potential pathways from the option to the receptor, based on qualifying species and habitats. The ZoIs have not been defined within the environmental report or appendices, and it's not clear from the SEA whether this has been done. Thames Water should: • clearly define the study area of the SEA, which should be wide enough to consider transboundary effects	We have reviewed and amended the SEA report to explicitly define the study area used and the Zone of Influence used for each SEA topic.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 14.4.2	Appendix D sets out the Environmental Baseline from the WRSE Scoping Report, it does not include specific baseline to the Thames Water's dWRMP24. The baseline does include key sensitive receptor and both current and future baseline information. Future baseline is described in general terms based on predictions from national sources and/or outcomes of policies rather than local based predictions or trends, for example one of the sources used is dated 2010. The future baseline doesn't appear to extend to the length of dWRMP24 of up to 2075. The baseline doesn't identify key issues, so it is not clear how the baseline information has informed the SEA Framework Objectives. The SEA Framework Objectives differ slightly to the WRSE SEA objectives, so it is unclear what has driven these changes considering they rely upon the same baseline information. The SEA objectives do not appear to have been influenced by an understanding as to how the local baseline will evolve specifically. Thames Water should: • provide further clarity to demonstrate how the baseline has helped shape the development of the SEA Framework • ensure the baseline information (including future baseline) should be made more specific to the company's plan	Our approach to describing our baseline for the SEA of our draft plan was to present the WRSE baseline supplemented with baseline information specific to the Thames Water area on a topic by topic basis. We have taken the same approach for our revised draft plan, but in response to this comment have reviewed to ensure that the local baseline information for our study area is clearly presented. We can confirm that the future baseline runs up to 2075 and have made this explicit. We have also provided further information as to how our local baseline has influenced the development of our SEA framework.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	area and be less reliant upon regional and national datasets		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 14.4.3	The temporal scope of the SEA has not been defined and therefore the SEA cannot be compared against the Regional Plan. The SEA needs to cover the length of the dWRMP24 of up to 2075. It does include an assessment of options 'beyond 2050' but it's not clear as to whether the assessment extends all the way up to 2075. Thames Water should define the temporal scope of the SEA, and review the assessment of effects to ensure that long term effects identified have covered this timeframe	As a change between dWRMP24 and rdWRMP, in response to this comment we have made explicit the fact that the option and plan based assessments have been conducted for the full plan, i.e. up to 2075.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B
Issue 14.4.4	All of the topics required under the SEA Regulations have been covered by the baseline and no topics have been left out of the scope, however no justification has been given as to why all topics have been scoped into the assessment. Thames Water should provide justification for all topics included in scoping. Thames Water should provide justification for the scoping in and out of topics from the assessment within Appendix D and the main environmental report	As a change between dWRMP24 and rdWRMP, in response to this comment we have included justification for the scoping in of SEA topics within the rdWRMP24 SEA report.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 14.5.1	Section 8 sets out the mitigation and enhancement measures, which includes embedded mitigation as well as additional mitigation measures which go beyond standard practice. Table 8-1 lists mitigation measures for each of the SEA topics, whilst Appendix H sets out the mitigation register used for the WRMP19 and those measures that are still applicable. These have been set out against each of the proposed options. However, as it is not currently clear whether the effects have been clearly identified and assessed, it is difficult to determine whether mitigation is effective. Thames Water should: • update the mitigation measures to include when the measure is expected to be undertaken and by who. The efficacy of the mitigation measures should be justified to support the final residual effects assessment conclusions and to give confidence that Likely Significant Effects can be avoided	As a change between dWRMP24 and rdWRMP, in response to this comment we have added further detail to the descriptions of mitigation within our SEA report to make it clearer as to who is anticipated to be carrying out mitigatory action and when.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 14.5.2	Section 9 sets out the monitoring proposal, the majority of which are proposals put forward as part of WRMP19 which have been reviewed and carried through into WRMP24 where relevant for continuity. Additional indicators have been included where new risks have been identified as part of WRMP24 and the indicators have been adapted to those developed as part of the SEA Framework. However, as there are currently some doubts over whether the effects have been clearly identified and assessed, it is difficult to determine whether monitoring measures will be effective. Thames Water should set out within the environmental report how monitoring will be implemented	As a change between dWRMP24 and rdWRMP, in response to this comment we have made our monitoring plan more specific and more detailed to enable readers to better understand how the monitoring will be used to understand to effects of the plan.	Changes made to our plan are as described in our consideration. See rdWRMP24 Appendix B
Issue 14.5.3	Proposals have been clearly set out in Table 9-1 and relate back to those negative (minor and significant) and uncertain effects identified within the assessment. Although timescales have been provided the indicators themselves are quite vague, for example 'condition of statutory and non-statutory ecological sites'. The environmental report does not provide any potential triggers or outline the appropriate remedial action that could be taken. This section states 'The UK Water Industry Research (UKWIR) guidance recommends that existing arrangements for monitoring should be used where possible to avoid duplication	As a change between dWRMP24 and rdWRMP, in response to this comment within our SEA monitoring plan we have provided additional information on our existing arrangements for monitoring, as well as specifically how this will be done across existing and new monitoring arrangements and (as far as feasible) proposed thresholds that would trigger remedial action to be taken.	See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	of effort'. However, the arrangements for the implementation of monitoring have not been provided. Thames Water should outline the need for triggers and thresholds for remedial action as well as a clear plan as to who, how, what and when for each monitoring measures within the environmental report		
Recommendation 15: Ensure the plan is legally compliant by adhering to the WRMP Directions. The plan fails Direction 3(d)			
Issue 15	We do not consider that Thames Water has complied with the Water Resources Management Plan (England) Direction 2022. Direction 3 (d) has not been complied with.	We have considered this comment in the rows below	We have considered this comment in the rows below
Issue 15	Recommendation 15: Ensure the plan is legally compliant by adhering to the WRMP Directions. The plan fails Direction 3(d)	We consider that the rdWRMP is compliant with Direction 3(d) of the WRMP (England) 2022 Directions. This Direction requires that TW must include in its WRMP a description of the matters set out below and considers that it has complied with those requirements.	Changes made to the WRMP are as per our consideration.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		1. Direction 3(d)(i) requires that the WRMP must include emissions of greenhouse gases which are likely to arise as a result of each measure TW has identified to maintain its supply demand balance. The complaint from the EA is not that this information was not included in the plan rather an absence of information to demonstrate that the stated emissions were reliable (see Issue 15.1 below). The emissions were contained at Table 11-27 in the dWRMP and are also include in the rdWRMP at Table 11-39 and 11-40. TW considers that the stated emissions are reliable for the reasons given below and how the emissions are calculated are now contained in the plan at Paragraphs 7.70-7.87. 2. Direction 3(d)(ii) requires that the WRMP must explain how the greenhouse gas emissions identified under Direction 3(d)(i) will contribute individually and collectively to TW's greenhouse gas emissions overall. TW's overall greenhouse gas emissions are now set out in Section 11, sub-section titled "Costs and Carbon Emissions". These are taken from the Thames Water 2022-23 Sustainability Report and ESG Statement[1]. TW has compared these total figures to the emissions identified in totals	

[1] Thames Water, 2023, Sustainability Report and ESG Statement 2022/23, https://www.thameswater.co.uk/media-library/home/about-us/investors/our-results/current-reports/thames-water-sustainability-report-and-esg-statement-2022-23.pdf

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		of the Tables 11-39 and 11-40, referred to above. It can be seen from these tables what the level of contribution towards greenhouse gas emissions from the WRMP is in relation to TW's overall total operational emissions. 3. Direction 3(d)(iii) requires TW to describe: a. Any steps it intends to take to reduce those greenhouse gas emissions. This is set out in Section 7 at 7.85-7.87 b. How those steps will support the delivery of any net zero greenhouse gas emissions commitment made by TW. This is set out in Section 11, in the "costs and carbon emissions" section, although we note that steps proposed in Section 7 are currently investigative and so are posited as steps which could be taken to reduce emissions. c. How these steps will support deliver of the UK Government's net zero greenhouse gas emissions targets and commitments. This is set out in Section 11, in the "costs and carbon emissions" section, although we note that steps proposed in Section 7 are currently investigative and so are posited as steps which could be taken to reduce emissions.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 15.1	The company has not provided evidence of any guidance or policies (e.g. PAS 2080) being used to perform whole life carbon assessment, as such the quality of carbon assessment output is in question. Improvement 6 below has further details. There is no evidence in the draft plan on what steps the company plans to take to reduce emissions other than using renewable energy for certain strategic supply options. There is also insufficient discussion on net-zero greenhouse gas emissions commitments, either from the company or the UK government, or when the company plans to meet these commitments, or targets contained within. This Direction failure is linked to Improvement 3. The company should review the requirements of WRMP Directions 3(d) and ensure its plan fully complies with the Direction.	In our consideration, we have applied appropriate approaches in the assessment of carbon. In our plan (both draft and revised draft), this is undertaken in two phases: - Option level carbon assessment: capital emissions, fixed operational emissions, and variable operational emissions (as well as electricity requirements) are determined for each option on the constrained list - Plan-level carbon assessment: using the option-level carbon assessments and the WRSE investment model, we calculate the plan-level emissions arising from the construction and use of the options in our plan. We agree, however, that the level of detail presented regarding these carbon assessments in the draft plan was not sufficient to give confidence in these assessments, and have included additional detail in our revised draft plan. We agree also that, while decarbonisation is discussed in the SRO Gated process documentation, this was not present in sufficient detail in our draft plan, and again we have included additional detail in our revised draft plan in this regard. We agree also that additional detail on company and UK carbon targets is required to comply with the direction, and have included additional detail in this regard in our revised draft plan.	In summary, changes made between the dWRMP and rdWRMP to ensure compliance with this representation are: - In Section 7 of the rdWRMP, we detail methods, guidance and policies applied in our carbon estimation - In Section 7 of the WRMP, we describe that we will work with the supply chain (e.g. steel and concrete manufacturers) to find new lower carbon solutions to construction, which will reduce emissions from our new supply sources. The All Company Working Group (ACWG), made up of the water companies with Strategic Resource Options (SROs), have engaged with the supply chain to develop scenarios on how different materials may decarbonise over time in the next 60 years. - In Section 11, referenced government and company targets for net-zero.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Recommendation 2: Manage the risk of inadequate delivery of its demand management programme			
Issue 2	Recommendation 2: Manage the risk of inadequate delivery of its current demand management programme. The company's plan is reliant on delivering significant water efficiency and leakage programmes in the first 10 years of its plan and if it fails to deliver it will mean that its customers will face risk to their supplies. The company does not sufficiently set out how it will manage this risk in its plan. The company should consider an alternative pathway (or back up plan) – with trigger points in case it cannot deliver its proposals. The company should ensure this alternative is ready to deliver if needed.	We recognise that there is a risk in the early part of our plan associated with demand management, as our supply-demand balance is contingent on delivering ambitious leakage and consumption reduction programmes. As described in answer to Issue 1, as a change between dWRMP and rdWRMP, we propose to have a preferred programme and alternative programme for the short term, with an initial learning and monitoring phase followed by a decision point.	We recognise the risks associated with under-delivery of demand management actions, and have proposed in our rdWRMP a plan involving a preferred programme and alternative programme for the short term, with an initial learning and monitoring phase followed by a decision point. This is discussed in answer to Issue 1, with detail in Section 11 of the rdWRMP. To manage very short-term risks, we have included additional supply options in our AMP8 delivery plan, as described in Section 11 of the plan.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 2	The company is highly reliant on demand management in the first 10 years of its plan and security of supply will be at risk if the company does not deliver its programme of leakage and customer demand reduction.	In the near-term, demand management and leakage reduction does form the majority of the interventions proposed to balance supply and demand. Customers expect us to prioritise demand management and we have done so. We support the twin-track approach, but recognise that resource developments take time to build, particularly at a size to match the scale of the deficits anticipated in the plan. Consequently, there are periods early in the planning period where we are dependent on demand management and few resource development options available. We have countered this risk by sensitivity testing the potential impacts of under-delivery and to prepare alternatives where possible, linked to the monitoring plan	Please see other reference to Issue 2
Issue 2.1	Thames Water leaks more water than any other company. The company has struggled to maintain its planned level of leakage, especially over the past year. While we welcome the ambition to reduce leakage, the company must demonstrate it can deliver its ambition. Furthermore, it will need to maintain these lower levels to ensure its customers' supplies are secure. The company should consider an alternative pathway (or back up plan) - with trigger points in case it cannot deliver its forecast leakage proposals. The company should ensure this alternative is ready to deliver if its leakage reductions do not materialise.	We are confident that we can deliver the leakage savings in our plan. Annually, leakage can fluctuate as it is influenced by weather events. We have also seen impacts from unforeseen events such as lockdown. We expect the impact of these events to even out over time. Uncertainty over the efficacy of company and government-led demand management savings is a risk. We have used sensitivity testing and enhanced our monitoring plan to show how we would deal with underperformance.	Please see response to Issue 2

Issue 2.1.1	Demand management makes up a significant contribution to the solution for the early part of the plan, with over 120 Ml/d savings being delivered in AMP8. However, there are a number of potential risks noted within the plan, including the under-delivery of the preferred demand programme, a potentially more challenging starting position for AMP8 given the impact of COVID19 on demand and the company's implementation of its WRMP19 demand management strategies. Current leakage and Per Capita Consumption (PCC) are above the WRMP19 dry year annual average forecasts without clear plans in place to get them back on track, raising concerns around the starting points in the dWRMP24 plan for these metrics. It does not appear that alternative options have been identified should these risks materialise, and therefore poses a risk to the plan. The plan states that the licence trade agreement with RWE could be extended as a mitigation measure for the shortterm for London, however, it does not appear that this has been considered through sensitivity testing. Alternative options have also not been identified for other zones. Thames Water should: • carry out a sensitivity test to understand the alternative options that would be required to mitigate the risk of under-delivery of demand management, both in	We recognise that there is a risk in the early part of our plan associated with demand management, as our supply-demand balance is contingent on delivering ambitious leakage and consumption reduction programmes. As described in answer to Issue 1, in response to comments around short-term risk, in our rdWRMP24 we propose to have a preferred programme and alternative programme for the short term, with an initial learning and monitoring phase followed by a decision point. We have also included options to be developed in AMP8, in response to concerns about short-term risks. We have carried out sensitivity tests to establish the alternative plans which we would adopt should leakage or per capita consumption not fall to the levels that we are planning for. The results of these are detailed in Section 10 of our rdWRMP. The inclusion of the RWE Didcot licence trade option is one which we do not consider to require sensitivity testing. The option is by far our lowest AIC option, can be brought online in a very short timeframe (requiring only a contract), and can be terminated if no longer needed. As such, the option is clearly the best option for managing small-magnitude risks in AMP8. As with previous plans, there remains risk around delivery. We have planned for this risk to our supply-demand balance with the inclusion of target headroom, which estimates uncertainty. We have also performed scenario and sensitivity testing in	Please see response to Issue 2

	the short- and long-term, and whether the plan is able to adapt to this change	WRSE optimisation, to further understand requirements if forecast baseline figures (e.g. population/supply/demand), or option feasibility changes.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 2.1.2	It appears that the plan is not adaptive to the success of demand management strategies in the short term despite being identified as a risk. For the long-term, the plan states that SESRO 150Mm3 may provide mitigation, but that the decision on SESRO is required imminently. There is therefore a risk to security of supply at the beginning of the plan, as well as a risk of sub-optimal plan for the longer term. Thames Water should: • consider different profiles of demand management delivery through sensitivity testing, including if savings assumed are not fully achieved, only partly achieved or are achieved later than planned	As a response to these comments, in developing our rdWRMP24 we have considered different profiles of demand management activity, and the implications for our plan, through sensitivity testing.	Section 10 presents the results of a wide range of sensitivity tests which considers uncertainty in reducing demand.
Issue 2.1.3	Thames Water should consider and incorporate the most up to date understanding of the short and long-term impacts of COVID19 on the baseline demand forecast	We have rolled forward the base year to 2022 (AR22). Consequently the impact of COVID19 is now built into the base year.	Our rdWRMP24 base year for our demand forecast is AR22 (i.e., incorporating COVID19 impacts) whereas our dWRMP24 base year was AR20.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 2.1.4	With reference to under-delivery of demand management activity, Thames Water should ensure that clear triggers are identified in the monitoring plan which if met would lead to alternative adaptive pathways. Thames Water should also consider an alternative pathway (or back up plan) – with trigger points in case it cannot deliver its proposals. The company should ensure this alternative is ready to deliver if needed.	We have described in response to Issue 1 our short-term monitoring plans and proposals for managing short-term risk.	Between dWRMP and rdWRMP, we have improved our monitoring plan. It now contains thresholds and triggers through which we would adopt alternative plans.
Issue 2.2	Thames Water's preferred plan includes the contribution from government interventions on demand management phased across the planning period. Thames Water has noted that by relying on government interventions to deliver a significant amount of the water savings included in the plan poses a risk to the plan. Sensitivity testing was performed on a range of government intervention strategies, as well as if no government interventions were included (section 10). Changes to the selection of large options have been presented based on the least cost plan, however, it is unclear whether additional smaller options would be required, and how these sensitivity tests may compare if performed on the best value plan. Thames Water should: • confirm whether any options in addition to the large options identified in the sensitivity tests are required under the	We have repeated and extended the sensitivity testing carried out for the revised draft plan. Over 150 have been carried out at regional level. Including them all, in full, would swamp the plan, so for brevity we have written up the ones that are most relevant to our plan and have only included the changes to the selection of the larger options as the metric impacts of smaller options are considerably lower than large options. WRSE include the full list of sensitivities carried out and outputs are available to discuss as required. We carry out sensitivity testing to inform the selection of the best value plan, rather than as tests on the best value plan. We have tested alternatives to the Least Cost and Best Value metrics runs in the revised draft plan.	We have not made changes to the information presented for sensitivity testing, for the reasons detailed in our consideration.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	different government intervention scenarios • consider performing sensitivity tests on the best value plan and present any changes in option selection and timing		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 2.3	Given the size of the leakage issues faced by Thames Water, we expect the company to invest in new research and development to identify ways it could substantially reduce leakage further than the 50% reduction target by 2050. Thames Water should consider whether it can go further than 50% reduction in leakage by 2050.	Since the draft WRMP, we have revised our leakage forecast for AMP7 and early AMP8, leading to a further reduction in leakage levels by 2049/50. In our revised plan, the high demand management basket, which is part of the preferred programme, achieves a leakage reduction of 52.5% reduction at 2049/50 (compared to 2017/18 levels). We also assessed a High+ basket which provides a 57.8% leakage reduction at 2049/50. However, this comes with significant additional cost for mains rehab and leakage innovation. In the future, we will continue to look to investigate ways that leakage could be further reduced, and for ways that leakage reduction can be achieved in a more cost-effective way. Based on our current knowledge, however, going significantly beyond 52.5% leakage reduction looks to be very cost inefficient and thus is not our preferred plan.	Between dWRMP24 and rdWRMP we have revised our demand management profiles, as is described in Section 8 of the rdWRMP24. This includes exploration of what would be required to achieve leakage reduction in excess of 50%.
Recommendation 3: Consider if the company can go further towards the government's target of 110 l/h/d or justify why it cannot do this.			

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 3	Recommendation 3: Consider if the company can go further towards the government's target of 110 l/h/d or justify why it cannot do this. The company should also include additional options to reduce non-household consumption and contribute to the Environment Act 2037/38 water demand target.	Since the publication of our draft plan, the WRPG was updated to require water companies to plan to achieve the 110 litres/head/day by 2050. Our revised draft WRMP has been revised to accommodate this target. We maintain that reducing consumption remains uncertain, as the activities that are within our control are largely limited to the installation of water meters, promotion of water efficiency activity (for example our involvement in public education) and, in the future, introduction of tariffs, and as such the success is dependent on individuals' response and cultural changes to water use. The primary driver of reductions in water use in our preferred plan are government-led activities in regard to changes in policy and regulations. In addition, since publication of our draft WRMP, there has been further focus on the business sector and water demand reductions and in our revised draft plan, we have included further measures including business tariffs, further water efficiency business visits, and retailer coordination to encourage the efficient use of water. We have included these activities in our revised draft plan.	Changes to our plan include: Our revised draft plan includes achievement of the 110 l/h/d by 2050 PCC target. Our revised draft plan includes significant non-household demand reduction activity Our revised draft plan meets the Environment Act targets at the company, apart from the 2037/38 PCC target (our plan hits 126.2 l/h/d PCC in 2037/38), which is a national target.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 3.1.1	Despite the reliance on demand management, the company's planned reduction in average per capita consumption does not meet the ambition expected of the industry and is insufficient in delivery against the government expectation of 110 litres/person/day by 2050. We acknowledge that achieving 110 litres/person/day could be a challenge for some companies and we do not want companies to plan for unrealistic forecasts. However, we expect Thames Water to set out possible options to go further towards the government's target or clearly justify and evidence why this is not possible.	Since the publication of our draft plan, the WRPG was updated to require water companies to plan to achieve the 110 litres/head/day by 2050. Our revised draft WRMP has been revised to accommodate this target. We maintain that reducing consumption remains uncertain, as the activities that are within our control are largely limited to the installation of water meters, promotion of water efficiency activity (for example our involvement in public education) and, in the future, introduction of tariffs, and as such the success is dependent on individuals response and cultural changes to water use. The primary driver of reductions in water use in our preferred plan are government-led activities in regard to changes in policy and regulations. We acknowledge the challenge that achievement of the 110 l/h/d target brings. We have conducted extensive sensitivity testing in producing our rdWRMP24 to confirm that the interventions which we will make now are the best value options for the long term, recognising this risk. We have also established that, if the target is missed, we will be able to invest in new sources of supply to ensure a resilient water supply, but our preferred plan gives us the time to respond to progress towards the 110 l/h/d target.	Changes to our plan include: Our revised draft plan includes achievement of the 110 l/h/d by 2050 PCC target. Our revised draft plan includes significant non-household demand reduction activity Our revised draft plan meets the Environment Act targets at the company, apart from the 2037/38 PCC target (our plan hits 126.2 l/h/d PCC in 2037/38), which is a national target. Section 10 of our rdWRMP includes discussion of sensitivity tests undertaken to explore the implications of different future PCC values.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 3.1.1	Thames Water's plan states in section 11.29 that it does not achieve 110 l/h/d per capita consumption by 2050. We note that the company has stated that the plan includes realistic and achievable demand strategies. PCC has also been reported under a normal year in the dWRMP commentary and not a dry year. However, government expectations are that this is a company level target and should be assessed under dry year conditions. Thames Water should: • Review whether the company can achieve 110l/h/d in a dry year at a company level • clearly set out the options required to achieve 110 l/h/d in a dry year at a company level	Please see our response to issue 3 regarding the first bullet. We acknowledge the need to describe the options which form our preferred plan.	Please see our response to issue 3 regarding the first bullet. In Section 11 of our rdWRMP, we describe the interventions which we consider necessary to achieve the 110 l/h/d target by 2050, under dry year conditions. This is a change to our dWRMP, where our preferred plan did not include hitting this target.
Issue 3.1.2	Thames Water notes that the majority of its customers use less than 110l/h/d, but that the average consumption is skewed by extremely high usage by some customers. We welcome the studies that have been undertaken on high-volume users, and the proposed actions to address this. Thames Water should consider whether any further acceleration of smart metering is possible and that this is targeted to zones that have experienced high demand over recent dry weather events. Thames Water should continue the studies into high-volume users and provide regular progress	We have detailed headline expectations from our recent high user study from Artesia within our final plan, as well as how it is incorporated within our PCC. Our consideration is that our rdWRMP metering programme is ambitious. Planning to accelerate this programme would give deliverability risks, leading to an unresilient plan.	In Section 8 of our rdWRMP, we have described the findings of our high user study. We have not significantly amended our household metering programme, for the reasons referenced in our consideration.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	updates on the studies and the proposed actions identified		
Issue 3.1.3	With reference to high PCC and 110 l/h/d Target being met by 2050, Thames Water should ensure the monitoring plan includes thresholds for changing pathways in the adaptive plan based on PCC	We have incorporated PCC monitoring into our overall monitoring plan which will help to identify the need to trigger alternative plans and supply-side interventions. We would not change our overall plan for supply-side interventions based solely on monitoring of PCC, with water resources planning interventions being the result of cumulative impacts. As an example, if we were to fail to reduce PCC but noticed population growth to be less than forecast then we may not require additional supply-side interventions.	In Section 11 of our revised draft WRMP, we have provided an enhanced monitoring plan (compared to dWRMP) which includes monitoring of PCC with stated thresholds.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 3.2	Through discussions with Thames Water and as a result of annual reviews, we are aware that there have been challenges around the implementation and realisation of the demand management programme planned for WRMP19. The company has indicated challenges in managing PCC and leakage during the 2022 drought and cold weather in 2023. We are aware that the company is considering recovery plans to ensure PCC and leakage returns to its WRMP19 forecasts, however, the dWRMP24 plan does not appear to have considered a change in the starting position as part of sensitivity testing. Thames Water should: • review the starting baseline position for PCC and leakage in line with current identified challenges with the WRMP19 forecasts and update the baseline forecast as necessary. • identify whether any additional options are required to meet this updated baseline position	For our revised draft WRMP we have updated our AMP7 leakage forecast on the basis of revised plans for this AMP (acknowledging the challenges posed to leakage reduction by the drought and cold winter in 2022), with an aim of achieving the leakage target at the end of the AMP as is forecast in the dWRMP. Similarly, we have updated our AMP7 PCC forecast on the basis of up to date data and our plans for the rest of this AMP. Whilst this is the case, and given that changes to the baseline can continue to occur, this uncertainty is considered outside of sensitivity runs for two main reasons. Firstly, while our initial baseline position may change, we would not amend our targets for leakage reduction during AMP8, and so consideration of the supply-demand surplus during AMP8 would suffice rather than sensitivity runs being necessary. Secondly, the 'forecasting supplement' accounted for within our baseline target headroom (the difference between our baseline target headroom at some point in the future and in the base year) provides a buffer which we include in our planning. We have an appropriate target headroom allowance in our WRMP24, and forecast a surplus with this buffer. This implies that these short-term uncertainties in leakage are ultimately not affecting the resilience of our supply.	Between dWRMP and rdWRMP, we have revised our leakage and PCC forecasts for AMP7 in the light of recent events and planned delivery for the rest of the AMP. Full details can be seen in the WRMP Tables. In recognition of the short-term risks which we face in our planning, we have changed the following between dWRMP and rdWRMP: - Provided an enhanced monitoring plan, with thresholds - Included options to be developed during AMP8 which will bring additional resilience. Both of these changes are described in Section 11 of the rdWRMP.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 3.3	Thames Water's plan has included a number of options to reduce non-household demand, including smarter business visits and smart meter installation. However, it is unclear how these contribute to the Environment Act 2037/38 water demand target. In the WRMP24 planning tables it appears the water use audits have been combined for household and nonhousehold demand, rather than being presented as separate options, making it difficult to assess the contribution of household and non-household savings. Thames Water should: • in collaboration with retailers, explore whether additional options to reduce nonhousehold demand could be included such as the assessment of smart metering for non-households • provide a clear explanation on how the options to reduce non-household demand contribute to the Environment Act 2037/38 water demand target, this should include presenting non-household demand options separately in the WRMP24 planning tables	Since our draft WRMP was published, further activities for business demand reductions have been discussed and are included for our revised draft WRMP, including business tariffs, further water efficiency business visits, and co-ordinated activity with retailers. We have updated our revised draft WRMP with these activities and added justification for the options considered and selected. We have presented water efficiency activities and savings for business and household customers use separately in our revised draft WRMP.	Section 8 Updated to include information on activities to promote and achieve reductions in water use with non-households. Section 8 Updated to clearly present household and non-household activities and forecast water savings, with a focus on the relationship between these savings and the EIP 2037/38 and 2049/50 targets.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Recommendation 4: Justify the size of the South East Strategic Resource Option (SESRO).			
Issue 4	Recommendation 4: Justify the size of the South East Strategic Resource Option (SESRO). A 100Mm3 reservoir is in Thames Water's preferred plan. However, the plan indicates that a larger reservoir performs better on some metrics and could also offer additional resilience and environmental benefits. If the company's preferred solution is a reservoir, it should ensure that it provides the best value solution for its customers and the environment. Thames Water should work with WRSE, and other companies to review and confirm the selection, size and alignment of its options. It should consider the wider benefits for the environmental destination that may be available with each size of SESRO	We have responded to this point through consideration of the more detailed points raised (detailed below)	We have responded to this point through consideration of the more detailed points raised (detailed below)

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 4.1	SESRO is a reservoir planned to be built in Oxfordshire to provide water from 2040. If the company's preferred solution is a reservoir, it should ensure that it provides the best value solution for its customers and the environment. The Environment Agency acknowledges this would cause disruption to local residents in the area during its construction and we expect Thames Water to manage these issues appropriately. The proposed new reservoir would provide water to Thames Water, Affinity Water and Southern Water customers. The companies' preferred plans include 100Mm3 SESRO reservoir. However, Thames Water's plan indicates that a larger reservoir (150Mm3) performs better on some metrics and could also offer additional resilience and environmental benefits. Thames Water, together with Affinity Water, Southern Water and the Water Resources in the South East group (WRSE), should revisit the justification for the size of SESRO. The justification should review benefits of earlier delivery of environmental outcomes and public water supply resilience and ensure the plans provide the best value for customers across the region.	Between dWRMP and rdWRMP, we have revisited our programme appraisal, accounting for new information and updates to guidance (e.g., 110 l/h/d PCC target, revised option cost information). While the justification is not repeated here, our programme appraisal (see Section 10 of our rdWRMP) confirms that SESRO is the best value solution for provision of long-term resilience of the WRSE region. We have revisited our justification for the size of SESRO and, based on the information set out in Section 10 of the WRMP, our consideration is that the 150 Mm^3 option presents best value to customers.	Between dWRMP and rdWRMP, we have revisited our programme appraisal, accounting for new information and updates to guidance (e.g., 110 l/h/d PCC target, revised option cost information). Changes made as a result of the revised draft WRMP24 programme appraisal process are detailed in Sections 10 and 11 of the rdWRMP, with the primary changes being: - Our consideration is that the 150 Mm^3 SESRO option is the best value option for provision of long-term resilience of water supplies - If the 110 l/h/d PCC target is achieved, SESRO provides sufficient resource and the Severn-Thames Transfer is deferred. Nevertheless, the Severn-Thames Transfer remains an important back-up option.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 4.1	SESRO 100Mm3 is selected in the best value plan for 2040 to meet all the pathways set out in the adaptive plan. However, the reasoning provided on the selection of SESRO 100Mm3 shows the decision is marginal. SESRO 100Mm3 is selected as it scores higher on some environmental metrics whereas SESRO 150Mm3 scores higher on resilience metrics. This issue links with recommendations we raised on WRSE, Affinity Water and Southern Water's WRMPs. The company has carried out sensitivity testing of different sizes of SESRO, based on the least cost plan. In section 10.289 the evidence presented shows the two options to be scoring broadly similar with marginal improvements in different Best Value Planning metrics with each sensitivity run. The company has also presented frequency analysis of options in the least cost modelling, which shows that SESRO 100Mm3 is only selected in pathways 7, 8 and 9, whereas SESRO 150Mm3 is selected 100% of the time for pathway 4 as well as across the other pathways (Table 10-19). Thames Water should: • revisit its justification for the size of SESRO selected in the preferred plan, taking better account of resilience and environmental benefits that may be provided by a larger SESRO, working with	Please see response to point above, also referenced issue 4.1 (a similar point having been raised in two places within the representation, with different wording). We confirm that the Thames Water plan is aligned with the plans of other companies in the WRSE region. The same level of detail has been presented in our WRMP for the different SESRO options.	Please see response to point above, also referenced issue 4.1 (a similar point having been raised in two places within the representation, with different wording).

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	WRSE and other water companies • consider any wider environmental benefits, for example, the impact on delivering environmental destination, for each size of SESRO • engage with Affinity Water, Southern Water and WRSE to ensure all plans align with the preferred solution • present evidence for SESRO 100Mm3 and 150Mm3 option to the same level of detail		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 4.2	SESRO 100Mm3 has been selected as the preferred option in the plan over the 150Mm3 option. However, it does not appear that the potential benefit to delivery of environmental destination has been included in the decision-making methodology. Therefore, there is a risk that the best value solution has not been identified. It is unclear whether the size of SESRO would influence the pace of environmental destination delivery. If a smaller SESRO impeded delivery of environmental destination, this may be incompatible with the requirement under the Water Environment Regulations (2017) to meet River Basin Management Plan objectives by 2027. If this is not possible, plans should describe how they will deliver solutions as soon as possible after 2027. This expectation was set out in the 23 December 2021 EA letter titled 'Our expectations for long-term environmental destination in final regional plans'. Thames Water should revisit the justification for selection of size of SESRO and include an assessment of how additional supplies from the reservoir could benefit environmental destination delivery. This should include assessing how the size of SESRO selected is compatible with the Water Environment Regulations (2017). The updated decision making should be clearly explained and	As discussed with reference to Issue 7, between dWRMP and rdWRMP, we have reconsidered the profiles of Environmental Destination in the light of the investment set out as being needed in the dWRMP (specifically that new resources are needed in the West of the catchment by 2040, meaning that acceleration of the Farmoor licence reduction would be feasible). As noted in response to Issue 4.1, we have revisited the justification for the size of SESRO, including potential benefits of earlier delivery of environmental outcomes and public water supply resilience.	Changes made in response to this comment include: We have amended our Environmental Destination profiles (detailed in Section 5 of the WRMP) to include earlier implementation of some licence reductions, enabled by infrastructure which we know to be necessary. As described in response to Issue 4.1, our preferred plan now includes selection of the 150 Mm3 SESRO option. As is described in Section 11 of our rdWRMP, there is surplus deployable output available from SESRO in the 2040s. This surplus water gives our plan additional resilience and means that we can adapt to scenarios of demand management underachievement without needing to make additional investments in new sources, and/or could feasibly make some licence reductions earlier than currently planned.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	should demonstrate that the decision meets the requirements of relevant environmental legislation.		
Recommendation 5: Demonstrate that the Gateway Desalination plan can reliably provide 75 Ml/d from 2025.			
Issue 5	Recommendation 5: Demonstrate that the Gateway Desalination plant can reliably provide 75 Ml/d from 2025 or outline if the company will decommission the plant.	We have responded to this consultation response through consideration of the more detailed sub-points	We have responded to this consultation response through consideration of the more detailed sub-points

Issue 5.1.1	Thames Water states that the deployable output of the Gateway Desalination plan can be reliably increase to 75Ml/d post AMP8. However, limited evidence is presented to support this assumption. The past performance and operability of this asset has led to serious concerns over the past 10 years and more recently the latest outage from November 2021. Concern remains over the current and future utilisation given the system set up and compliance with the Drinking Water Inspectorate requirements over potability and appearance. • provide a programme of works planned for AMP8 to ensure deployable output can be increased at the Gateway Desalination plant. • ensure that progress is reviewed and reported on in the WRMP annual reviews and is linked to an appropriate a threshold to trigger remedial action within the monitoring plan	As noted in the draft WRMP24, we have a programme of investment for the rest of AMP7 and AMP8 which will restore the capability of the desalination plant. We are committed to work openly and transparently with the Environment Agency, sharing information on the programme of work. We have incorporated the availability and forecast future capability of the Gateway desalination plant into our monitoring plan, in order to ensure that our plan is resilient.	Between dWRMP24 and rdWRMP4, we have updated Section 4 of our WRMP to include commentary on our progress in restoring the capability and reliability of the desalination plant, and our plans for the remainder of AMP7 and AMP8. We have not updated our deployable output forecast for the Gateway WTW between dWRMP and rdWRMP, as it presents the best current view of expected outputs from our investment programme. In response to this comment, we have included monitoring of the progress regarding the Gateway desalination plant within our rdWRMP monitoring plan, as described in Section 11.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 5.1.2	With reference to reduced DO of Gateway desalination plan, Thames Water should undertake a sensitivity test to assess the impact of this option not being available at greater deployable output post AMP8 and outline the impact of this on option selection within the plan	We agree that this sensitivity testing is needed. We have carried out sensitivity testing for changes in base performance, such as for Gateway output.	The revised Section 10 includes a specific sensitivity test for Gateway output post AMP8.
Issue 5.2.1	Thames Water's Gateway Desalination plant has suffered from extended outage over the last few years. Through discussions with the company, we were made aware that the current reliable deployable output of the scheme was 50Ml/d. Thames Water should update Table I-3 in Appendix I to reflect the changes to deployable output between WRMP19 and WRMP24 for the Gateway Desalination	We agree - we have made changes to Appendix I to better reflect the Deployable Output on which our WRMP is based.	Appendix I of our rdWRMP has been updated to include an expanded description of the Deployable Output profile assumed for the Gateway desalination plant.
Issue 5.2.2	With reference to long-term capability of the desalination plant, The company has included this change within its dWRMP24, and states that this results in no material change to the plan. However, in section 10 (10.237) the company states that the reduction in deployable output leads to different options selected for the best value plan and has implications on Southern Water's WRMP24 plan. The materiality of these changes is not presented; therefore, it is unclear what the significance of these changes may be. Thames Water should provide further assurance that the change does not	We have carried out sensitivity testing for changes in base performance, such as for Gateway output. The impacts of these tests are shared with other SE water companies.	Sections 10 and 11, including sensitivity testing, re-written for the revised plan with regional impacts in mind.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	cause a material change to option selection in Thames Water's preferred plan and Southern Water's preferred plan		
Recommendation 6: Progress the feasibility studies for the Teddington Direct River Abstraction for the final WRMP and set out alternative solutions if the options are unviable.			
Issue 6	Recommendation 6: Progress the feasibility studies for the Teddington Direct Reuse Abstraction and set out alternative solutions if the option is unviable. The company should ensure that all RAPID priority actions are completed by 31 August. This is to ensure that mitigation for environmental impacts is available before inclusion in the final WRMP. Any changes should be reflected in the company's adaptive planning. The company should also address our concerns regarding adjusting the Lower Thames Operating Agreement.	Thames Water are working closely with the EA to respond and address the actions set through the RAPID gated process according to the schedule set out in the RAPID Final Decision on each SRO (noting that 31 August has been superseded by schedules set out in the final decision). However, our consideration is that this work should not impede the finalisation of the WRMP as the Teddington DRA scheme has been selected as one of the best value schemes in the WRSE best value plan and shown to be feasible and viable through the work completed to date through RAPID Gate 1 and Gate 2. The actions set through the RAPID gated process are matters for the planning and permitting regimes to refine the types and scale of mitigation measures where deemed necessary following full environmental impact assessment.	The Teddington DRA scheme continues to be part of our preferred programme, as it is a cost-effective option which is deliverable by the early 2030s. A change between dWRMP24 and rdWRMP, due to recognition of the risks raised, is the enhancement of our monitoring plan, which includes a short-term monitoring phase where we confirm feasibility and viability of the Teddington DRA scheme and either progress with this option or will switch to our alternative option, Beckton Water Recycling.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		Thames Water has put forward an adaptive WRMP which includes continuing developed of a number of alternative water recycling schemes and work on these will continue over the next couple of years.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 6.1	Teddington DRA: In 2030-31, Thames Water plans to bring on a new scheme at Teddington on the River Thames. In Thames Water's WRMP19, the Environment Agency rejected the scheme due to unacceptable impacts on the environment. Thames Water has re-introduced the scheme and made substantial improvements. However, the Environment Agency still has a number of reservations based on impact on the environment and viability in the long term. The company is working through issues raised via funding from the RAPID gated process. The viability of the scheme may not be known until August 2023. This may require Thames Water to delay revising its plan until after this date. Given that the Teddington Direct River Abstraction has not yet been shown to be feasible or environmentally acceptable, the company should ensure alternatives are progressed. Thames Water should ensure any options selected are resilient, reliable and do not cause any adverse environmental impacts.	It has been demonstrated through Gate 1 and Gate 2 of the RAPID process that the Teddington DRA scheme is feasible and provides a viable way of providing an additional source of raw water during periods of prolonged dry weather. Scheme feasibility is proven with the development of a concept design and environmental appraisal that shows low risks of significant environmental effects. There is more work to be completed as the scheme progresses through the RAPID gated process, and the planning and permitting regime and environmental assessments, which will refine the scheme design, and mitigation measures. This work will address the recent actions set by the EA and should not impede the finalisation of the WRMP which is a strategic plan. The issues raised relating to providing greater certainty on design, environmental effects and mitigation measures are matters for refinement through the planning and environmental permitting processes and should not be prejudice the inclusion of the scheme within the WRMP.	The Teddington DRA scheme continues to be part of our preferred programme, as it is a cost-effective option which is deliverable by the early 2030s. A change between dWRMP24 and rdWRMP, due to recognition of the risks raised, is the enhancement of our monitoring plan, which includes a short-term monitoring phase where we confirm feasibility and viability of the Teddington DRA scheme and either progress with this option or will switch to our alternative option, Beckton Water Recycling. We will continue to progress alternatives until feasibility and viability of the Teddington DRA is confirmed.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 6.1.1	Teddington Direct River Abstraction (DRA) is selected in the preferred plan at 2031 to provide improved level of resilience of 1:200 to Thames Water's London Water Resource Zone (WRZ). There are still concerns regarding the feasibility of this scheme due to its environmental impacts. We understand that further work on mitigation is ongoing by Thames Water through the SRO Gated process. We have some significant reservations about this option, yet section 11.109 does not appear to fully reflect this. Some of these concerns could be addressed if the scheme included high standards of additional tertiary treatment to reduce residual risk to water quality and ecology. There is an expectation that some of these challenges can be dealt with through increasing permit constraints and treatment performance. The demanding requirements of these constraints are significant and pose a risk to the ability of the scheme to be delivered. Thames Water should ensure: • feasibility studies for the Teddington DRA are progressed, along with the alternative solutions to ensure options are available should Teddington DRA be deemed infeasible • that all RAPID priority actions identified for the mid gate check points are carried out by 31 October to ensure that	The concerns raised by the EA are regarded as matters to be addressed under the planning and permitting regimes for a scheme and should not prejudice the inclusion of the scheme within the final WRMP which is a strategic plan. Thames Water has shown that the scheme is feasible and the risk of significant environmental effects is low for the scheme size selected. Thames Water has also shown that mitigation measures exist, should they be required, to address both current legislation on water quality standards but also should the EA impose increased constraints and treatment performance through the permitting process. Thames Water are working closely with the EA to address actions set through the RAPID gated process by 31 August 2023 for Teddignton DRA and also progressing work on alternative solutions should these be required, if the Teddington DRA scheme is found to be infeasible.	The Teddington DRA scheme continues to be part of our preferred programme, as it is a cost-effective option which is deliverable by the early 2030s. A change between dWRMP24 and rdWRMP, due to recognition of the risks raised, is the enhancement of our monitoring plan, which includes a short-term monitoring phase where we confirm feasibility and viability of the Teddington DRA scheme and either progress with this option or will switch to our alternative option, Beckton Water Recycling. We will continue to progress alternatives until feasibility and viability of the Teddington DRA is confirmed.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	mitigation for environmental impacts is available before inclusion in the final WRMP any changes reflected in the adaptive planning		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 6.1.2	Within Appendix D section 3.2.4 (London Re-Use:Teddington DRA), the text reflects company's current view on the low risk to Water Framework Directive (WFD) from this option, but does not reflect the EA's uncertainty about this option, albeit further work is identified here and in Table 3.15 to reduce uncertainty regarding this option. Thames Water should update relevant parts of the plan to include Teddington DRA as requiring further WFD assessment	As a response to this comment, we consider that we have made the Agency's position on the Teddington DRA scheme clear within Appendix D.	Changes made in response to this comment are detailed in our consideration. See rdWRMP24 Appendix D
Issue 6.1.3	We welcome that the company has carried out a sensitivity test to show which options are selected as alternatives if Teddington is not feasible, and that this is considered as part of the adaptive plan monitoring. However, the company should ensure that all RAPID priority actions are completed by 31st August 2023 to ensure that mitigation for environmental impacts is available before inclusion in the final WRMP and any changes reflected in the adaptive planning. We encourage Thames Water to continue working with WRSE to ensure the inclusion of this scheme is valid, as well as progress alternative solutions.	Thames Water are working closely with the EA to respond and address the actions set through the RAPID gated process by 31 August 2023. However, this work should not impede the finalisation of the WRMP as the Teddington DRA scheme has been selected as one of the best value schemes in the WRSE best value plan and shown to be feasible and viable through the work completed to date through RAPID Gate 1 and Gate 2. The actions set through the RAPID gated process are matters for the planning and permitting regimes to refine the types and scale of mitigation measures where deemed necessary following full environmental impact assessment. Between our dWRMP and rdWRMP, we have reconsidered the sensitivity tests required to identify alternatives to the Teddington DRA scheme – these are presented in Section 10 of the rdWRMP.	The Teddington DRA scheme continues to be part of our preferred programme, as it is a cost-effective option which is deliverable by the early 2030s. A change between dWRMP24 and rdWRMP, due to recognition of the risks raised, is the enhancement of our monitoring plan, which includes a short-term monitoring phase where we confirm feasibility and viability of the Teddington DRA scheme and either progress with this option or will switch to our alternative option, Beckton Water Recycling. We will continue to progress alternatives until feasibility and viability of the Teddington DRA is confirmed. Revised sensitivity testing undertaken between dWRMP and rdWRMP is detailed in Section 10 of the rdWRMP.

Issue 6.2	Thames Water has committed to meeting 1:200 level of resilience by 2030, with the Teddington DRA enabling this. However, in section 11.106, the company has indicated that should the construction or implementation of Teddington DRA be delayed, then a mitigating action could be an alteration to the Lower Thames Operating Agreement (LTOA). This has not been discussed in detail with the Environment Agency, and we have concerns regarding the environmental impacts of this proposal. There are notable environmental risks from increasing abstraction during drought events, and we also have concerns with the limited ability to reduce the Thames Target Flow to 200 Ml/d. Thames Water should: • Work with the Environment Agency to understand the viability of the proposed changes to LTOA to mitigate delays in Teddington DRA delivery, considering environmental impacts as well as operational viability • Consider alternative mitigating actions/options should there be a delay in delivery of Teddington DRA	Achievement of an increased level of drought resilience, a 1 in 200-year Level of Service by 2030, was contingent on the development of the Deephams water recycling scheme, as is set out in WRMP19. Further work and Environment Agency feedback led us to reject this option, and we do not have other options which can deliver the volume of water required on the same timescale. As such, we have had to revise our ambition for providing a higher level of resilience and we made this clear in our dWRMP. We have revised the proposed delivery date for our 1 in 200-year resilience to align with a more conservative delivery schedule for the Teddington DRA (and alternative schemes). As such, we are more confident that the proposed date will be achieved and thus do not reference the option of temporary amendment of the LTOA in our rdWRMP.	We have revised the proposed delivery date for our 1 in 200-year resilience to align with a more conservative delivery schedule for the Teddington DRA (and alternative schemes). As such, we are more confident that the proposed date will be achieved and thus do not reference the option of temporary amendment of the LTOA in our rdWRMP.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Recommendation 7: Review the timing and scale of the environmental destination			

Issue 7	Recommendation 7: Review the timing and scale of the environmental destination. The company has not sufficiently justified its delay of parts of the environmental destination, including delaying the Lower Lee sustainability reductions until 2060.	In our dWRMP, our preferred programme facilitated achievement of the "Enhanced" scenario of abstraction reductions set out in the National Framework for Water Resources, through our high environmental destination scenario. Noting that some abstraction reductions were included after the 2050 "backstop" date. We have considered feedback received from the EA and Natural England that it is not acceptable to plan for Environmental Destination reductions to be made to be after 2050, and as such we have moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario, meeting the National Framework for Water Resources expectation. Alongside ensuring compliance with guidance, we have also considered whether there are opportunities to accelerate the process of investigation, identification of required abstraction reductions, design and implementation of solutions, and we have considered whether we could adapt our schedule of licence reductions. We do not consider that applying a fractured approach to delivering the programme of reductions sooner than this revised schedule would present best value to customers, because of the need for significant replacement resources and replacement infrastructure to enable reductions to be made for both London and the Thames Valley. Therefore, we do not consider it realistic to plan for a programme of reductions that would be quicker than that set out in our revised draft plan. We consider the process of investigation to establish	Changes made are as follows: We have altered the profiles of some licence reductions used as input datasets in our WRMP. This is presented in Section 5 of the WRMP. The main changes are: - Advancement of the timing of reductions at Lower Lee and NNRWs from 2060 to 2050, to comply with the 2050 date requirement. - New Gauge DO reduction moved from 2060 to 2050, to comply with the 2050 date requirement - Advanced timing of reductions at Farmoor and Ashton Keynes from 2050 to 2040, with justification given in Section 5. - Epsom reduction moved back from 2030 to 2035 in response to EA feedback on draft WINEP. In Section 5 of the rdWRMP we have included additional discussion of the assessment of feasible timescales for implementation of licence reductions.

		need, design of solution to assess cost-benefit, followed by implementation to be very important, and the timescale set out in our revised draft plan would allow for this.	

Issue 7.1	The delivery profile for environmental destination also appears to be a linear trajectory from the start of the planning period to 2050, with no optimisation to consider earlier delivery with solutions that may be available sooner than included in the best value plan. We expect the company to consider an optimal delivery profile for environmental destination, considering whether solutions can be delivered sooner to enable environmental protection and improvements to be delivered as soon as possible. Thames Water should: • consider the optimal profile of the delivery of the environmental destination to ensure it complies with environmental regulations. • clearly justify why the delivery of environmental destination cannot be accelerated or delivered by 2050, or if statutory deadlines cannot be met explain how the approach is compatible with the WFD Regulations • sets out the mitigating actions that will be undertaken to ensure protection of the environment until alternative sources are available	In our dWRMP we did not use a linear trajectory in determining the scheduling of licence reductions that may be needed to facilitate an "Environmental Destination". Instead, we included licence reductions which we feel have a high probability of being required earlier in the plan and placed most licence reductions at the backstop date of 2050, reflecting the require process of investigation, solution development, solution construction, and associated timescales. In our dWRMP we included some abstraction reductions after the 2050 "backstop" date. Between our dWRMP and rdWRMP we have taken on board comments from the EA and Natural England that it is not acceptable to plan for Environmental Destination reductions to be made after 2050, and as such we have moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario. Alongside ensuring compliance with guidance, we have also considered whether there are opportunities to accelerate the process of investigation, identification of required abstraction reductions, design and implementation of solutions, and we have considered whether we could adapt our schedule of licence reductions. Through our 'Vulnerable Catchments' workstream and the WINEP actions associated with determining a Regional Environmental Destination, in AMP8 we will look to determine whether there are catchment interventions that could be made which will mitigate interim environmental risks	Changes made are as follows: We have altered the profiles of some licence reductions used as input datasets in our WRMP. This is presented in Section 5 of the WRMP. The main changes are: - Advancement of the timing of reductions at Lower Lee and NNRWs from 2060 to 2050, to comply with the 2050 date requirement. - New Gauge DO reduction moved from 2060 to 2050, to comply with the 2050 date requirement - Advanced timing of reductions at Farmoor and Ashton Keynes from 2050 to 2040, with justification given in Section 5. - Epsom reduction moved back from 2030 to 2035 in response to EA feedback on draft WINEP. In Section 5 of the rdWRMP we have included additional discussion of the assessment of feasible timescales for implementation of licence reductions.

		and/or negate the need for licence reductions in future.	

Issue 7.2	Thames Water's dWRMP24 narrative sets out the concern regarding the uncertainty associated with the environmental destination. In the introduction text to Section 5, the plan states "there is a lot of uncertainty over which sources we will need to take less water from in the future" environmental destination uncertainty is referred to repeatedly in the plan. We are concerned that the plan narrative overstates the level of uncertainty around the environmental need compared to other types of uncertainty in the plan. Where river flows and ecology are negatively impacted in catchments where water companies are the major abstractor, it is likely that a reduction in those abstractions is required. The plan narrative also implies that environmental destination as a new element of the WRMP is a major driver of investment (e.g. section 11.15), when it appears the deficit driven by environmental needs is comparable to that driven by the need for supply resilience. Reducing abstractions that impact the environment is a statutory requirement and should be reflected as a 'must do', whilst acknowledging there is an element of uncertainty over the scale of need. The plan should avoid giving the impression that the overall need is uncertain Thames Water should: • review its narrative for environmental destination, ensuring this provides a more balanced view of the level of certainty of	We acknowledge that reducing abstractions that impact the environment is a statutory requirement and should be reflected as a 'must do'. This is the reason that, both in our dWRMP and rdWRMP, we have described our preferred programme as one which aligns with the "Enhanced" scenario of licence reductions. We agree that, the narrative within our dWRMP overstated the uncertainty around the need for environmental improvement. As such, we have amended narrative in Sections 2, 5, 6, and 11 of our WRMP. The National Framework for Water Resources, published in March 2020 sets the environmental ambition required to address unsustainable abstraction between 2025 and 2050 on a national scale. The Framework sets out that Regional Water Resource Plans are required to develop an agreed environmental destination to achieve sustainable abstraction by 2050. WRSE worked with the Environment Agency and all water companies in the South East region to develop agreed Environmental Destination scenarios. They developed five scenarios, Low, Medium, High, BAU+ and Enhanced. We have integrated the Low, Medium and High, into our supply forecast. These scenarios are known as scenarios of 'Environmental Destination'. For Thames Water the High scenario equates with the Enhanced scenario, and this is common with most of the WRSE water companies. Within these scenarios, we are required to consider the Environmental Destination scenarios set out in	We have amended Sections 2, 5, 6 and 11 of the WRMP in response to this comment, giving greater consideration to the National Framework for Water Resources and guidance.

	environmental need, particularly in a changing climate where the impact of abstraction on the environment will increase over the plan period • clearly outline the legal minimum requirements of the environmental destination as well as proposed improvements above that level	Appendix 4 of the National Framework for Water Resources (WRPG says that companies in England should use guidance titled "Long term water resources environmental destination", and in this guidance it says that companies should use the BAU and Enhanced scenarios). The guidance document, "Long term water resources environmental destination" states, "use the 2050 BAU scenario as the starting point to ensure you comply with current statutory and regulatory requirements in the future" and "use the enhanced scenario to identify where it may be necessary to provide enhanced protection to buffer from predicted climate change impacts". The WRSE Regional Plan led the development of the Environmental Destination scenarios, in line with the National Framework for Water Resources. Given that the DO reductions which result from the BAU+ scenario and Enhanced scenario are very similar, we have used the Enhanced scenario in our preferred plan. We have placed most weight on this scenario which is reflected in Pathway 4 (our preferred programme), as well as pathways 1 and 7. Whilst we agree that there is a degree of uncertainty involved in predicting the volume of licence reductions which may be required in the future, we consider that this is the correct approach for the purposes of long-term planning. Given that there is a degree of uncertainty in the volume of licence reductions required in the future, we have also considered two lower scenarios in our adaptive plan, which are reflected in pathways 5 and 6, 2 and 3, and 8 and 9 of our plan.	

		We do not consider that we could state the legal minimum requirements of the environmental destination as opposed to proposed improvements above this level. As referenced in the Environment Agency's representation: - Reducing abstractions that impact the environment is a statutory requirement - Where river flows and ecology are negatively impacted in catchments where water companies are the major abstractor, it is likely that a reduction in those abstractions is required (according to statutory requirements) - There is an element of uncertainty over the scale of need Our consideration is that investigations are required to determine the legal minimum licence reductions that are required.	

Issue 7.3.1	Thames Water's plan has indicated that the delivery of the Lower Lee abstraction reductions for the environmental destination have been delayed until 2060. However, the justification for this delay is not sufficient. We expect environmental destination to be delivered by 2050 at the latest as per the National Framework expectations. The final 2060 delivery date for Environmental Destination falls beyond the 2050 expectation from the Water Resources National Framework. Our expectation is that 2050 is a final backstop for delivery of the most difficult changes. In Section 5.45 the company states that "ecological benefits from reductions in the Lee Valley surface water system would require significant modifications to the channel morphology of the Middle and Lower Lee, and it is not considered that 2050 is a realistic data for these modifications to have been achieved. 2060 has been proposed as an alternative date in this case." This is not a suitable justification for delay as it does not meet the specific and limited circumstances for delays to meeting objectives under Water Environment (Water Framework Directive) Regulations 2017. It also assumes there is no benefit to restoring flow to the lower Lee until morphological benefits have been realised. We do not agree with this and believe there would be considerable benefits from flow restoration, even if fully	In our dWRMP we did not use a linear trajectory in determining the scheduling of licence reductions that may be needed to facilitate an "Environmental Destination". Instead, we included licence reductions which we feel have a high probability of being required earlier in the plan and placed most licence reductions at the backstop date of 2050, reflecting the require process of investigation, solution development, solution construction, and associated timescales. In our dWRMP we included some abstraction reductions after the 2050 "backstop" date. Between our dWRMP and rdWRMP we have taken on board comments from the EA and Natural England that it is not acceptable to plan for Environmental Destination reductions to be made after 2050, and as such we have moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario. Alongside ensuring compliance with guidance, we have also considered whether there are opportunities to accelerate the process of investigation, identification of required abstraction reductions, design and implementation of solutions, and we have considered whether we could adapt our schedule of licence reductions. Through our 'Vulnerable Catchments' workstream and the WINEP actions associated with determining a Regional Environmental Destination, in AMP8 we will look to determine whether there are catchment interventions that could be made which will mitigate interim environmental risks	Changes made are as follows: We have altered the profiles of some licence reductions used as input datasets in our WRMP. This is presented in Section 5 of the WRMP. The main changes are: - Advancement of the timing of reductions at Lower Lee and NNRWs from 2060 to 2050, to comply with the 2050 date requirement. - New Gauge DO reduction moved from 2060 to 2050, to comply with the 2050 date requirement - Advanced timing of reductions at Farmoor and Ashton Keynes from 2050 to 2040, with justification given in Section 5. - Epsom reduction moved back from 2030 to 2035 in response to EA feedback on draft WINEP. In Section 5 of the rdWRMP we have included additional discussion of the assessment of feasible timescales for implementation of licence reductions.

	achieving ecological targets may not be possible until other measures have been taken. Thames Water should explain the timings of abstraction reductions under the environmental destination to demonstrate that the plan meets the requirements of the Water Environment Regulations 2017. This should include testing a scenario to assess the feasibility of achieving the environment destination by the Water Resources National Framework expectation of 2050. If this shows that it isn't feasible, the feasible date must be clearly justified based on the specific and limited exemptions permitted under the WFD Regulations. Thames Water should also provide further justification for the delay in delivering the Lower Lee environmental destination, considering whether alternative options or delivery profile would be able to deliver this environmental benefit	and/or negate the need for licence reductions in future.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 7.3.2	Regarding the timing of Environmental Destination licence reductions, some assumptions are made about feasibility and timings of abstraction reductions that we believe should be checked now that the WRSE draft Best Value Plan has been set out. This is necessary in order to demonstrate that the scenarios plan to meet the requirements of the Water Environment Regulations (2017) to deliver as quickly as feasible. Thames Water should ensure the plan considers how earlier delivery of options could impact on timing of planned sustainability reductions, and consider any schemes that could be delivered earlier than set out in the preferred plan, and whether these would enable earlier delivery of sustainability reductions	The timings of sustainability reductions are dependent upon both replacement resource being available and infrastructure to enable continuity of supply being deliverable in time to enable the reductions. In this context we have undertaken a review of the required reductions within each WRZ across the Thames Water supply area. In general, we do not consider that applying a fractured approach to delivering the programme of reductions sooner than our revised schedule would present best value to customers, because of the need for significant replacement resources and replacement infrastructure to enable reductions to be made for both London and the Thames Valley. Therefore, we do not consider it realistic to plan for a programme of reductions that would be quicker than that set out in our revised draft plan. We consider the process of investigation, design of solution to assess cost-benefit, followed by implementation to be very important, and the timescale set out in our revised draft plan would allow for this. One situation where we have been able to revise our plan and bring forward the option is in the case of proposed reduction in abstraction at Farmoor. Enabling this reduction would involve the delivery of a major new resource by 2040 (either SESRO or STT), which would enable us to transfer water Farmoor during low flow periods thereby enabling a reduction in abstraction at Famoor. The need for new sources of water in the west of the Thames	Changes made are as follows: We have altered the profiles of some licence reductions used as input datasets in our WRMP. This is presented in Section 5 of the WRMP. The main changes are: - Advancement of the timing of reductions at Lower Lee and NNRWs from 2060 to 2050, to comply with the 2050 date requirement. - New Gauge DO reduction moved from 2060 to 2050, to comply with the 2050 date requirement - Advanced timing of reductions at Farmoor and Ashton Keynes from 2050 to 2040, with justification given in Section 5. - Epsom reduction moved back from 2030 to 2035 in response to EA feedback on draft WINEP. In Section 5 of the rdWRMP we have included additional discussion of the assessment of feasible timescales for implementation of licence reductions. As is described in Section 11 of our rdWRMP, there is surplus deployable output available from SESRO in the 2040s. This surplus water gives our plan additional resilience and means that we can adapt to scenarios of demand

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		catchment by 2040 (due to the 1 in 500-year resilience requirement and Southern Water's needs) means that we have brought forward this proposed licence reduction to align with the date that this new strategic resource is required regardless of this abstraction reduction.	management underachievement without needing to make additional investments in new sources, and/or could feasibly make some licence reductions earlier than currently planned.

Issue 7.3.3	Water companies are public bodies and therefore have a duty under the WFD Regulation 33 to have regard to the river basin management plans, which includes the statutory environmental objectives. The Water Environment (Water Framework Directive) Regulations 2017 requires all water bodies to aim to achieve good ecological status or potential. The deadline is to achieve this by 2027 at the latest, with only very limited exemptions allowing the date to be extended beyond 2027. If the statutory environmental objectives in the river basin management plans cannot be met, we expect WRMPs to justify why the solution cannot be delivered by the required deadline. Given these pressing statutory timescales we expect delivery of the solution to be planned for the earliest feasible and affordable delivery date, for example the earliest delivery date for a scheme to provide replacement water and thereby enable an abstraction reduction to go ahead. Thames Water should explain the timings of abstraction reductions to demonstrate that the plan meets the requirements of the Water Environment Regulations 2017. If any changes are not planned as quickly as feasible, the company will need to alter the plan or provide robust justification why abstraction reductions cannot be delivered sooner	In our dWRMP, our preferred programme facilitated achievement of the "Enhanced" scenario of abstraction reductions set out in the National Framework for Water Resources, although noting that some abstraction reductions were included after the 2050 "backstop" date. We have considered feedback received from the EA and Natural England that it is not acceptable to plan for Environmental Destination reductions to be made to be after 2050, and as such we have moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario, meeting the National Framework for Water Resources expectation. Alongside ensuring compliance with guidance, we have also considered whether there are opportunities to accelerate the process of investigation, identification of required abstraction reductions, design and implementation of solutions, and we have considered whether we could adapt our schedule of licence reductions. We do not consider that applying a fractured approach to delivering the programme of reductions sooner than this revised schedule would present best value to customers, because of the need for significant replacement resources and replacement infrastructure to enable reductions to be made for both London and the Thames Valley. Therefore, we do not consider it realistic to plan for a programme of reductions that would be quicker than that set out in our revised draft plan. We consider the process of investigation to establish need, design of solution to assess cost-benefit,	Changes made are as follows: We have altered the profiles of some licence reductions used as input datasets in our WRMP. This is presented in Section 5 of the WRMP. The main changes are: - Advancement of the timing of reductions at Lower Lee and NNRWs from 2060 to 2050, to comply with the 2050 date requirement. - New Gauge DO reduction moved from 2060 to 2050, to comply with the 2050 date requirement - Advanced timing of reductions at Farmoor and Ashton Keynes from 2050 to 2040, with justification given in Section 5. - Epsom reduction moved back from 2030 to 2035 in response to EA feedback on draft WINEP. In Section 5 of the rdWRMP we have included additional discussion of the assessment of feasible timescales for implementation of licence reductions.

		followed by implementation to be very important, and the timescale set out in our revised draft plan would allow for this.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 7.3.4	Thames Water should ensure that progress on environmental destination is reviewed and is linked to thresholds within adaptive planning	Through the WINEP, we will undertake low-flow investigations to determine whether licence reductions may be required. We will incorporate understanding gained from these investigations into our monitoring plan and WRMP29.	Our monitoring plan has been revised, detail is provided in Section 11 of our WRMP.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 7.4	The data that is currently in the public domain as the target for achieving long term sustainable abstraction is the National Framework for Water Resources. We expect companies to explain to stakeholders and regulators any changes that have been made to the Environmental Destination since the National Framework was published. The EA's Long-Term Water Resources Environmental Destination, Guidance for Regional Groups and Water Companies. (Oct 2020) stated that: "Where you have constrained your ambition, you need to clearly explain what you have decided not to include in your proposals and why". It's particularly important to explain any rivers or sources that have been screened out of the Environmental Destination. Thames Water should review the volumes of the licence reductions in line with National Framework and clearly set out the reasoning and the justification for any differences. The company should include the details of those sources that have been screened out for requiring sustainability changes including licence, location, and reason for screening out.	In the "High" scenario, reductions have been included at all sources such that the "Enhanced" scenario from the National Framework for Water Resources, provided from the Environment Agency, would be met, with the exception of the Bean source. The reason for this is that the Bean source was suggested as a new groundwater development to enable the reductions in abstraction required in the Darent catchment to improve flows and indeed the EA have suggested further abstraction is feasible to exploit water currently lost through the dewatering activities at Blue Water Park. Therefore, having recently developed this new source as a sustainable alternative to abstraction in the Darent catchment as advised by the EA it does not seem sensible to plan to make reductions from this source in the future. We do not consider the Bean source to have adverse impact on the Darent and so we do not feel that abstraction reductions are necessary and we understand this to be the view of the local EA team.	Changes have been made to Section 5 of our WRMP consistent with our consideration detailed here

Issue 7.5.1	The impacts of the no deterioration requirements do not appear to have been correctly applied by the company. The use of the 2009-2020 period is incorrect and underestimates the capping requirements. In addition, the capping has been scheduled not to take effect until 2040 which would be unacceptable. No deterioration capping for New Gauge and Northern New River Wells (NNRW) have not been incorporated. Action is required as quickly as technically possible to ensure waterbodies achieve Good Ecological Status. • include a no deterioration assessment for New Gauge and NNRW • assess against the agreed appropriate period with the Environment Agency to ensure realistic capping requirements	This consultation response appears to be a result of misunderstanding regarding the way that we have applied the requirements of the new licence capping policy. We acknowledge that we should have included more detail regarding the assessment undertaken into Section 5, as this consultation response indicates mis-understandings from conversations had on the topic, rather than being based on information presented in our WRMP. We note that, given the late introduction of this “licence capping” policy, an interpretation of the Water Framework Directive, into the requirements of our water resources planning, we would have appreciated a more proactive approach in helping us understand the requirements of the supplementary guidance on this topic, as we found the guidance fairly unclear and there being a lack of clarity regarding which sources should be considered as requiring a licence cap. Regarding the points raised: - We have not adopted a 2009-2020 baseline period for assessment of licence capping requirements. We considered this as appropriate in the case of Northern New River Wells assessment, as the 2009-15 baseline period was impacted by pollution, meaning that we felt it to be an unreasonable choice for the baseline period. Following conversation with the EA, we have determined an alternative approach to establishing licence changes required to offset the risk of deterioration. - Licence capping requirements were incorporated into our dWRMP Environmental Destination profiles	Between dWRMP and rdWRMP, we have re-assessed the 'licence capping' requirements according to a baseline period discussed as being acceptable to the Environment Agency. Regarding the NNRW sources and New Gauge specifically, we have provisionally agreed an interim Section 20 agreement for the period 2030-35 to reduce abstraction across the NNRWs and New Gauge to levels which remove any potential risk for deterioration of the River Lee while not necessitating significant investment. An expanded description of the calculation approach taken in determining licence capping requirements is included in Section 5

		from 2030 onwards. The same is true in our rdWRMP. - Both the NNRW and New Gauge no deterioration requirements were incorporated into our dWRMP profiles. The same is true in our rdWRMP.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 7.5.2	Section 5.51 states that the use of the factor applied to groundwater abstraction (30% impact) developed for Affinity Water appears to have been applied to the Thames Water company scenarios. The factor has significant uncertainty associated with it and hasn't been demonstrated to apply to the Thames Water supply area. This is likely to lead to the company scenarios (and therefore the Medium and Low scenarios) to be significantly underestimating the sustainability reductions required). Thames Water should ensure an appropriate impact factor is used for the Thames Water scenarios	This consultation response appears to be the result of a misunderstanding of the approach taken. The reference to the 30% factor is made in reference to determining Deployable Output gain that would be accounted for in London's supply-demand balance when licence reductions are made at upstream sources. Our "Low" and "Medium" scenarios were not formulated on the basis that they would meet EFIs. The justification is that if our "Low" and "Medium" scenarios had been derived on the basis of meeting EFIs across all water bodies (regardless of the scenario considered), they would have been substantially the same as our "High" scenario (i.e., we would not have had an adaptive plan which would adequately consider the risk that licence reductions may not be required). The formulation of the "Low" and "Medium" profiles therefore did not make use of any Impact Factor.	No changes have been made to the WRMP following this consultation response point for the reasons set out in our consideration.

Issue 7.6	We welcome the inclusion of a number of sites that have been identified as priority for delivery for abstraction reduction implementation in AMP8 Section 2, 2.62. However, there are several other ongoing investigations in AMP7 considering deterioration risk, and it is unclear whether the outcomes of these investigations will be feeding into the delivery list for reductions in AMP8. It is not clear how licence capping requirements will be applied in the period between now and investigations being completed, and whether abstraction at sources at risk of causing deterioration will be kept constant until the source has been investigated (Section 5, 5.54 – 5.56). It is not clear how the licence capping guidance has been applied to modify the priority/timing of reduction requirements as noted in 5.56. New Gauge and Northern New River Wells (NNRW) have not been incorporated. The delay of no deterioration actions until 2040 for the NNRW is not acceptable. Delaying much of the London sustainability reductions to 2050-2060 is not sufficiently justified. Action is required as quickly as technically possible to ensure waterbodies achieve Good Ecological Status. Thames Water should: • ensure implementation of reductions informed by AMP7 investigations is appropriately included in the planning scenarios	We have included allowances for reductions to meet “No Deterioration” WFD requirements based on current AMP7 investigations at Bradfield, Netley Mill, Chinnor, the Swells and the NNRWs. New Gauge is also included, although the nature of our water resources system means that abstraction reduction at New Gauge does not bring with it DO reduction. In the interim between the investigation being completed and the need for the licence capping we have assessed the requirement for increased abstraction and based on our WRMP demand projections we will not need to increase overall abstraction because of the focus on demand management in our WRMP. We have also moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario. This includes the movement of reductions in the Lower Lee and in the Northern New River Wells from 2060 to 2050 to meet the National Framework for Water Resources expectation. We have also allowed for a reduction in NNRWs combined with New Gauge with an estimated DO impact of 25 Ml/d between 2030-2035, this will be accompanied by a Section 20 Agreement to enable abstraction in circumstances where needed to offset the risk of severe drought impact. We will then implement a licence reduction at New Gauge from 2035 to continue the 25 Ml/d reduction and at this point re-evaluate the need for reductions in NNRWs to ensure no deterioration. We will then revisit the need for further reduction in	Changes made are as follows: We have included allowances for reductions to meet “No Deterioration” WFD requirements based on current AMP7 investigations at Bradfield, Netley Mill, Chinnor, the Swells and the NNRWs. We have also moved our environmental destination scenarios so that all reductions are made by 2050 in the high scenario. This includes the movement of reductions in the Lower Lee and in the Northern New River Wells from 2060 to 2050 to meet the National Framework for Water Resources expectation. We have also allowed for a reduction in NNRWs combined with New Gauge which has an overall DO impact of 25 Ml/d between 2030-2035, this will be accompanied by a Section 20 Agreement to enable abstraction in circumstances where needed to offset the risk of severe drought impact. This DO reduction is included in order to satisfy the WFD No Deterioration requirement as clarified by the “Licence capping” policy. We will then implement a licence reduction at New Gauge from 2035 to continue the 25 Ml/d reduction and at this point re-evaluate the need for reductions in NNRWs to ensure no deterioration. We will then revisit the

	• ensure capping guidance is clearly and appropriately applied	2050 although currently we allow for a reduction of abstraction at NNRWs of 40 Ml/d in 2050.	need for further reduction in 2050 although currently we allow for a reduction of abstraction at NNRWs of 40 Ml/d in 2050.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 7.7	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 and how far the company has gone to meet the requirements of the NFWR. The company has provided deployable output reduction by WRZ in the planning tables however the plan does not say what environmental outcomes they expect to achieve. Thames Water should: • 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 • provide detail on the expected outcome the changes will achieve for the environment • explain the predicted benefits from the Environmental Destination for protected areas Where appropriate this should include Chalk streams, SSSIs covered by	Table 5-4 in Section 5 of the dWRMP includes deployable output changes and the timings of the reductions proposed in each of our environmental destination scenarios. In the rdWRMP, we have provided more detail on licence number and licence point as requested. At this stage we are not able to provide detail on the expected outcome the changes will achieve for the environment except where we have undertaken detailed investigations previously or are in the process of doing so in this AMP period. Where we have this information, we have included it in the rdWRMP. In this context we will also include predicted benefits from the Environmental Destination for protected areas including Chalk streams, SSSIs covered by the Wildlife and Countryside Act 1981, and Sites designated under the Conservation of Habitats and Species Regulations 2017.	We have made changes to Section 5 of our WRMP following this comment, with the main change being inclusion of tables which give substantially more information regarding licence changes included in different scenarios, licence information associated with reductions, and the likely benefits where they are known.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	the Wildlife and Countryside Act 1981, and Sites designated under the Conservation of Habitats and Species Regulations 2017		
Recommendation 8: Demonstrate that the company does not cause Water Framework Directive deterioration.			

Issue 8	Recommendation 8: Demonstrate that the company does not cause Water Framework Directive deterioration. The company should undertake its licence capping methodology correctly, consider cumulative impacts and ensure that its new options do not cause deterioration.	After discussion with the Environment Agency, for the rdWRMP we have revised our view of licence reductions and DO reductions that would be needed to satisfy the requirements of the new "licence capping" policy, which is an interpretation of the No Deterioration requirement of the Water Framework Directive. We note that, given the late introduction of this "licence capping" policy, an interpretation of the Water Framework Directive, into the requirements of our water resources planning, a more proactive approach would have been beneficial in helping us understand the requirements of the supplementary guidance on this topic, as we found the guidance unclear with there being a lack of clarity regarding which sources should be considered as requiring a licence cap. The Water Framework Directive assessments of our options and plan have been updated in line with the latest River Basin Management Plans. We have also incorporated further technical detail regarding the intended operation and sustainability of options with regards to the ecological impact of any increase in abstraction proposed and wider WFD compliance. This further work includes more detailed information on proposed mitigation where this is potentially needed to offset any anticipated impacts. This approach has been discussed with local EA teams.	The licence reductions required to comply with the "licence capping" guidance have been revised between the dWRMP and rdWRMP. This has involved: - Revising the baseline timescale over which past abstractions are assessed - Revising the approach taken to ensure that the EA are content that there is no possibility for a risk of deterioration in the River Lee, involving the proposal of a temporary Section 20 agreement to cover reductions at the Northern New River Well sources and New Gauge The Water Framework Directive assessments of our options and plan have been updated in line with the latest River Basin Management Plans, and also to incorporate further technical detail regarding the intended operation and sustainability of options with regards to the ecological impact of any increase in abstraction proposed. This further work includes more detailed information on proposed mitigation where this is potentially needed to offset any anticipated impacts. This approach has been discussed with local EA teams.

Issue 8.1	Section 5.54 of the draft plan describes the approach to preventing deterioration through licence capping. However, there is insufficient detail in the description of this section on licence capping to give us confidence in the approach taken to prevent deterioration. Discussions with Thames Water has also raised concerns that this approach may be inconsistent with neighbouring water companies. Further work and discussions with the Environment Agency area staff are required to improve confidence that the plan takes the most appropriate approach to preventing deterioration. The use of the 2009-2020 period for defining recent actual abstraction is incorrect and underestimates the capping requirements. In addition, the capping has been scheduled not to take effect until 2040 which would not be acceptable. Thames Water should: • update its plan to clearly demonstrate and provide assurance that WFD deterioration will be prevented. All schemes that restrict abstraction to resolve an imminent risk of deterioration through licence capping must be planned for implementation by 2030 • continue engagement with the Environment Agency and ensure any changes are included in the final plan	After discussion with the Environment Agency, we have revised our view of licence reductions and DO reductions that would be needed to satisfy the requirements of the new “licence capping” policy, which is an interpretation of the No Deterioration requirement of the Water Framework Directive. We acknowledge that we should have included more detail regarding the quantitative details of the assessment undertaken into Section 5. We have updated Section 5 to include this detail. We note that, given the late introduction of this “licence capping” policy, an interpretation of the Water Framework Directive, into the requirements of our water resources planning, a more proactive approach would have been beneficial in helping us understand the requirements of the supplementary guidance on this topic, as we found the guidance fairly unclear .	The licence reductions required to comply with the “licence capping” guidance have been revised between the dWRMP and rdWRMP. This has involved: - Revising the baseline timescale over which past abstractions are assessed - Revising the approach taken to ensure that the EA are content that there is no possibility for a risk of deterioration in the River Lee, involving the proposal of a temporary Section 20 agreement to cover reductions at the Northern New River Well sources and New Gauge We have updated Section 5 to provide a more comprehensive description of the approach taken in determining the requirements of the licence capping policy.

Issue 8.10	The information provided for the Datchet increase in deployable output is inconsistent in the WFD Appendix relating to this scheme. Section 2.2.7 states two water bodies were assessed at Level 1, and the outcomes indicated no further assessment would be necessary. However, the outcomes of the Level 1 assessment indicated that the Lower Thames Gravels groundwater body requires further assessment (Table 2.8, page 17). Level 2 assessments indicate there is a risk of deterioration (Section 3.1.3), indicating further assessment is required and references a summary of the Level 2 assessment is detailed in Table 3.3. On review of Table 3.3 (page 38), the Chiltern Chalk Scarp waterbody is referenced, not the Lower Thames Gravels. This water body is also referenced in Table 6.3 (page 80) detailing the WRMP24 BVP Level 2 options which require further assessment. The Scheme Dossier (page 80, Appendix R) doesn't detail depth of boreholes to determine which water body is appropriate, although Environment Agency mapping suggests this abstraction is from the chalk. Cumulative effects suggest risk to water quality of surrounding surface water bodies however it appears that these waterbodies haven't been scoped into the Level 1 or Level 2 assessment. Level 1 assessment only includes Thames	In response to this comment, the WFD assessment for this option has been reviewed and updated to resolve errors. We have also included further technical information on the intended operation of this option to make our position on its sustainability clearer and more comprehensively justified, as well as making any risks clearer. We have detailed any further work needed to fill any information gaps as well as any needed mitigation and monitoring, making it clear as to when and how we anticipate this will be carried out. This approach has been discussed with local EA teams.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

	(Cookham to Egham) which may not be appropriate. We are unable to determine or comment on appropriateness of assessment due to these issues. Thames Water should: • update the WFD Appendix to clarify whether abstraction is from Chalk or gravels • update report to remove errors • update Level 2 WFD assessment to ensure correct potential impacts are assessed. Either all seven depending on guidance (noting that four of the seven don't result in an impact score) or the three which have an impact score • update assessments and report to more clearly indicate the "possible" deterioration between statuses could result in an impact score of three, and impact on the water body objectives • provide additional information regarding water quality risks		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 8.11	The company need to ascertain how this may interact with the rising trend of contamination at Southfleet. Ebbsfleet has been reinstated as a cycle 3 WFD waterbody and features in plans Waterbody ID is GB106040024190. Company need to ascertain impacts on flows in the chalk-fed Ebbsfleet which can have low flow concerns. If 8.8 Ml/d are abstracted from these abstraction points, then, the 8.8 Ml/d rate would be a significant proportion of the amount that the company are allowed to abstract under the aggregated licence. A high-level view would be that when compared to abstractions near the top of the catchment, abstracting at places like Greenhithe and Southfleet, where the sensitivity of abstractions on river flow is lower is of benefit. However, it does not seem to coincide with abstraction reductions along the Darent. Therefore, it appears, at present, this would represent an overall increase of abstractions in the area of the Darent catchment. In addition, the abstraction could have a detrimental impact on flows of the River Ebbsfleet. However, it is understood, an investigation to assess the impact of the abstraction is already considered by the company. Additional habitat improvements on the Ebbsfleet to renaturalise as much as possible within the existing constraints will	In response to this comment, the WFD assessment for this option has been reviewed and updated. We have included further technical information on the intended operation of this option to make our position on its sustainability clearer and more comprehensively justified, as well as making any risks clearer. We have detailed any further work needed to fill any information gaps as well as any needed mitigation and monitoring, making it clear as to when and how we anticipate this will be carried out. This approach has been discussed with local EA teams.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	protect the watercourse from natural drought. The company should: • ensure WFD impacts of the option on the Ebbsfleet is understood and clearly presented within the plan. • consider including additional habitat improvements to protect the watercourse from drought. • confirm that the investigation to understand the impact is being undertaken		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 8.2	Thames Water's WFD assessment has not considered the cumulative downstream impacts of options in combination with respect to flow compliance or aggregated at a groundwater body scale. The assessment should also include in combination impacts of other water company options that may have been carried forward within shared water bodies, both surface water and groundwater. Section 11.254 states that the cumulative impact of the plan is yet to be addressed. Thames Water should: • ensure it has considered cumulative downstream impacts of options with regard to flow compliance or aggregation at a groundwater body scale within the WFD assessment • ensure the WFD assessment includes in-combination impacts of other water company options, within shared waterbodies for both surface water and groundwater • ensure it has considered the impacts of planned growth within the WFD assessment	In response to this comment, we have reviewed our approach to ensure that all options are considered as appropriate within our cumulative effects assessments, and to consider other water company options where these affect a shared waterbody. We understand from discussions with the Agency that 'planned growth' refers to the options selected in the plan, and we have ensured that the WFD assessment covers these comprehensively. Section 11.254 of the draft plan states the following: "Consideration of the impacts of our plan alongside other plans and programmes has identified that, of the 21 water bodies impacted by more than one option in our preferred plan, 5 are also impacted by one or more other planning projects. The cumulative effects assessment indicated that none of these waterbodies are at risk of further deterioration due to the combination of options and planning projects. Further information on the planning projects would be required to further quantify the cumulative effects on these water bodies; we will consider this further as we finalise our plan." This has been considered within our revised draft plan, will be validated and finalised as part of the finalisation of our rdWRMP24.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 8.3	Risk of deterioration from development of new sources and licence uplift if not reflected fully in the L1 or L2 WFD assessments for example Woods Farm, although 'further investigation' is a noted requirement in Section 11.236, 11.250-11.255. In the case of Woods Farm, the source does not appear as an AMP8 investigation in the current iteration of the WINEP. Thames Water should appropriately consider the risk of deterioration arising from flow pressures induced by licence uptake or development of new sources. This needs to be included in assessments, and any resulting investigations may need to be brought into AMP8 WINEP.	The WFD assessment for our options has been reviewed and updated in light of this comment. We have included further technical information on the intended operation of this option to make our position on its sustainability clearer and more comprehensively justified, as well as making any risks clearer. We have detailed any further work needed to fill any information gaps as well as any needed mitigation and monitoring, making it clear as to when and how we anticipate this will be carried out. This approach has been discussed with local EA teams. We have also reviewed as to whether any of the proposed investigations need to be included in our AMP8 WINEP programme.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D
Issue 8.4	Thames Water's plan does not contain any options to prevent deterioration related to its new options. This, in part, is due to the limited deterioration assessment of current sources and planned options within the plan itself. The WFD Assessment only considers the WFD impact and to some degree deterioration risks of constrained options. The plan does not take into account the deterioration risk from planned growth of existing sources or the cumulative impacts of growth and new options. Thames Water should provide further information on whether there are any options it could implement to prevent	We understand from discussions with the Agency that options to prevent deterioration in this case refer to mitigation measures for options that pose a risk of causing deterioration. We have reviewed our WFD assessments in light of this and proposed suitable mitigation measures as indicated by this review. We understand from discussions with the Agency that 'planned growth' refers to the options selected in the plan, and we have ensured that the WFD assessment covers these comprehensively. With regards to the WFD compliance of existing sources, ascertaining this compliance for existing	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	deterioration. The company should provide further information on whether its current operations or future use will pose a risk of deterioration and include this in the WFD stage 1 assessment.	sources is covered by our WINEP investigations as a matter of course.	

Issue 8.5	There does not appear to be a WFD assessment included for Deephams Reuse or London Confined Chalk schemes (referenced in Table 11-7, left) in Appendix D: WFD Assessment. Additionally, there is no reference to cumulative impacts and the London Confined Chalk scheme. It is not clear how the TLT extension from Lockwood PS to King George V Reservoir intake has been considered within WFD assessment. We would expect to see a flood risk assessment for the additional volume of water discharged. The waterbodies screened in for a Level 1 assessment have all been screened out of a Level 2 assessment. This hasn't included the Moselle Brook (GB106038027920) or Turkey Brook and Cuffley Brook (GB106038033180) water bodies. Based on the schematic (page 143 of the Scheme Dossier) and the water bodies which have been screened in, it's likely these two water bodies should also have been included. Given the reference to "sub-structures and in-river works for the outfall to River Lee diversion" (page 142, Appendix R – Scheme Dossier) – there is a need to ensure appropriate mitigation is in place for these activities and structures, including appropriate fish/eel screening and mitigation for additional physical modifications to this water body. However, there is no current reference to such mitigation. Additionally, there isn't	An oversight in dWRMP reporting led to, of the options selected post-2050, the SRO options being assessed within Appendix D of the draft plan but not all of the Non-SRO options. Specifically, the Deephams Reuse scheme was omitted in error and has now been included in Appendix D of the revised draft plan. Kempton WTW 100 Ml/d has also been omitted, but a larger size of the same scheme (150Ml/d) has been assessed within the draft plan and found to have a sufficiently low compliance risk as to not be progressed to Level 2 assessment. As such, there are no WFD compliance concerns from a smaller size of this scheme, but nevertheless it has been included in our revised draft plan assessments. Our London Confined Chalk scheme was selected Post-2050 in our Least Cost and Best Environment and Society Plans, and was also omitted from our WFD assessments in error. This has now been rectified. We have reviewed our assessment for the Thames Lee Tunnel Extension option in light of this feedback, and can confirm that we do not expect any direct interaction with Turkey Brook and Cuffley Brook WFD waterbodies. We have included the Moselle Brook in our updated assessment. We consider that a flood risk assessment is outside the remit of a WFD assessment of this stage of planning, and would expect this to be completed as part of a planning application. With respect to the new intake structures on the River Lee, these were not included in error. We have now included them	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D for updates to include option assessments omitted in error, as well as option assessments for options newly selected within the revised draft plan.

	reference to outfall construction within the relevant impacts which are being assessed within the Level 1 spreadsheets – ie., Row 30 and 32 within the 'Assessments' tab is detailed as N/A for all water bodies. This doesn't appear correct based on the information detailed within the Scheme Dossier. Thames Water should Include: • the WFD assessment of the WFD T2AT, Deephams Reuse and London Confined Chalk WFD assessments • the WFD assessment should consider the TLT extension from Lockwood PS to King George V Reservoir • ensure the Moselle Brook and Turkey Brook and Cuffley Brook water bodies are scoped in. Ensure the outfall construction is detailed against the relevant water body, with appropriate mitigation detailed	in the assessment but these are given a score of 1 (minor localised effects) with the assumption that appropriate fish and eel screens are provided as is standard for the company. As outlined in Section 1.2 of Appendix D (TW dWRMP24 WFD assessment report), post-2050 options are not taken forward for further assessment or inclusion in the cumulative effects assessment at this stage due to the uncertainties regarding future environment for these options.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 8.6	The consideration of the cumulative impacts of neighbouring Affinity Water's plan proposals on individual water bodies appears to be lacking. This can be demonstrated via the Lower Thames Gravels WB, where Thames Water has identified a risk of deterioration from its Datchet Increase in DO. Affinity Water has identified this water body as one where cumulative effects could lead to an increased risk of WFD deterioration (Table 5.5, page 53 of Affinity Water's Appendix 7.2.3), including a number of planning projects for mineral extraction etc. Despites risks identified by Affinity Water, Thames Water has only highlighted this WB as one where "cumulative effects are unlikely to lead to an increased risk of WFD deterioration" by identifying it in Table 4.1 (page 67). Thames Water should work with Affinity Water to assess and reflect other company schemes detailed within the WRMP as part of the inter-plan cumulative risks sections.	In response to this comment, we have reviewed with other water companies to consider the potential for cumulative impacts of our options with other water company options where these affect a shared waterbody. This assessment has been validated and finalised as part of the finalisation of the rdWRMP24.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

Issue 8.7	The Woods Farm source was previously considered in AMP7 as requiring an investigation into the risk of deterioration posed by the source in-combination with other sources in the catchment. The licence impacts the surface water body AP4, Reading, which coincides with GB106039030331 through depletion of the groundwater flow supporting the surface water body. This surface water body is currently assessed as compliant under the Recent Actual and Future Potential flow scenarios. However, these scenarios are both based on limited use of this source, and a limited growth rate factor has also been applied to the source (<1.0). Under the Fully Licensed flow scenario, the water body becomes non-compliant. While this is affected by a large number of sources, and Woods Farm is only a small contributary source, uptake of licence towards fully licensed would not be permissible, and the licence should be considered for capping. Confirmation of this need and the appropriateness of actions or the risk of licence uptake should be developed through an investigation, during which time abstraction rates should remain stable. The reason this licence was not carried forward to an investigation in AMP7 was that there was expectation an 'upstream use' condition could be added to the licence at the time of variation, similar to that applied to the Gatehampton licence	In response to this comment, the WFD assessment for this option has been reviewed and updated. We have included further technical information on the intended operation of this option to make our position on its sustainability clearer and more comprehensively justified, as well as making any risks clearer. This includes evidencing that this water will be needed and used locally. We have detailed any further work needed to fill any information gaps as well as any needed mitigation and monitoring, making it clear as to when and how we anticipate this will be carried out. This approach has been discussed with local EA teams.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

	which would otherwise adversely impact the same water body. Thames Water has subsequently notified us that use of this condition is not feasible at Woods Farm. If this cannot be conditioned, the licence will need to be added to the Investigations for AMP8 ahead of the need for licence uptake in early the 2030s. Further, deterioration of the surface water body may contribute to deterioration of the groundwater body quantitative compliance. Depending on the outcomes of further investigation, some growth of sources may be permitted providing flow remains above the Environmental Flow Index. The WFD level 2 assessment sheet for Woods Farm indicates that the possible impacts on hydrological regime are identified as 'unclear and require further investigation', and this appears to have carried forward to no risk of deterioration of status of compromising of objectives which at this stage is not the conclusion that should be drawn. We are not aware Woods Farm is listed as an AMP8 investigation on the company's WINEP. Similar high-level identification of possible impacts on groundwater, but pathway to status deterioration does not appear to be clearly characterised. Again, investigation of impacts would contribute to understanding of risks associated with licence uptake. Appendix D, summary of WFD assessment, indicates only the groundwater bodies have been identified		

	for further assessment. Thames Water should: • ensure the Woods Farm source is included in AMP8 investigations in company WINEP • ensure WFD assessments appropriately reflect risk of deterioration posed by licence uplift		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 8.8	The risk of deterioration is a threat to the feasibility of Moulsford option being developed. A holistic assessment of current impacts on the impacted water bodies is required for Moulsford option before developing an understanding of the risk of further development. Options may be developed with constraints on where water is used, or timing of use to avoid deterioration. Table 11-11 – the requirement of a Moulsford groundwater source development option will impact the same surface and groundwater body at risk of deterioration under the existing fully licensed scenario as discussed above in relation to the Woods Farm licence uptake. It is noted in Appendix D, summary of WFD assessment, that the option will include conditioning of where water can be used (upstream condition). This has been applied at other groundwater sources known to contribute to impacts and risk on Thames surface water in the area. This may mitigate adverse impacts. It is not clear what the difference between Moulsford options 1 and 2 is. Option 1 is larger but was rejected based on the Environment Agency not supporting a licence in this location. It is not clear why the smaller option does not identify similar concerns given the location is presumably the same, and there is the same risk of	In response to this comment, the WFD assessment for this option has been reviewed and updated. We have included further technical information on the intended operation of this option to make our position on its sustainability clearer and more comprehensively justified, as well as making any risks clearer. This includes evidencing that this water will be used locally such that it provides effluent returns to the river upstream of the abstraction point. We have detailed any further work needed to fill any information gaps as well as any needed mitigation and monitoring, making it clear as to when and how we anticipate this will be carried out. This approach has been discussed with local EA teams.	Changes made in our WRMP are consistent with the consideration described here. See rdWRMP24 Appendix D

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	requiring licence constraints or other licence adjustments to develop as a neutral option		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 8.9	The proposal for New Gauge abstraction indicates this is not just limited to a low flow investigation and should include implementation in AMP8. The current proposal may include relocating abstraction downstream, within the vicinity of the Lee Valley reservoirs. The option for New Gauge has not been included within the WFD appendix. There will be implications for a number of water bodies, including the Lee Navigation from Hertford to Fieldes Weir, and subsequent aspects of the River Lee, depending on the proposed re-abstraction location, the New River and possibly the reservoirs which are also WFD water bodies. This needs to be assessed collectively. The no deterioration requirements for New Gauge appear to have been omitted. Together with Northern New River Wells this could significantly alter the available Deployable Output. Thames Water should ensure a WFD assessment is undertaken for the proposals regarding the New Gauge abstraction, and this is included within the appropriate documents.	This is traditionally part of the scope for WINEP rather than WRMP and so hasn't been covered, as New Gauge isn't a WRMP supply option.The WINEP investigation is ongoing and has an end date of March 2025. The investigation will address the WFD requirements, and the reduction would be implemented in order to address the requirement to move towards flow compliance in the Lee Navigation. The deployable output implications are built into the WRMP as a result of the No Deterioration measures for the NNRWs and the reduction in abstraction at New Gauge. The relocation of abstraction to lower in the Lee will result in replacement of abstraction with no net increase anticipated and so we do not anticipate WFD deterioration.	No change is required because the implications for the deployable output are already included in the WRMP. The WFD implications of the abstraction reduction delivery are covered through the WINEP investigation.
Recommendation 9: Review and progress alternatives to the Severn Thames transfer, while continuing work to assess its feasibility. Ensure that the transfer is represented consistently across United Utilities, Severn Trent Water and Thames Water.			

Issue 9	Recommendation 9: Review and progress alternatives to the Severn Thames transfer, while continuing work to assess its feasibility. Ensure that the transfer is represented consistently across United Utilities, Severn Trent Water and Thames Water. The company should also continue its work on the feasibility of the Severn Thames transfer and mitigation identification. Given that the River Severn to Thames transfer has not yet been shown to be feasible or environmentally acceptable, the company should ensure alternatives are progressed. Thames Water should ensure any options selected are resilient, reliable and do not cause any adverse environmental impacts. The company should ensure that the actions identified for the RAPID mid-gate check points are progressed sufficiently and any changes reflected in the adaptive planning.	We are continuing to develop alternatives as appropriate to ensure that, should unmitigable issues be found with any of our water resources schemes, others could be adopted in our preferred plan. We have worked hard as part of the STT SRO group, and as part of the WRSE Regional Group (which undertakes 'Regional Reconciliation'), to ensure that our view of the STT option is as aligned as it can be in our respective Regional Plans and WRMPs. It has been very difficult, given the challenging timescales for production and publication of RPs and WRMPs, to ensure full alignment. As an example of these difficulties, Water Resources West stated a need for a confirmed position on the Severn-Thames Transfer options selected in the WRSE region's final plan before the end of the Thames Water WRMP consultation, in order to facilitate the development of the WRW plan - something which WRSE and TW could clearly not provide with confidence. We feel that a degree of misalignment in WRW/WRSE RPs and associated companies' WRMPs is to be expected given the exceptionally challenging timescales and complex methods used in the development of WRMPs and Regional Plans, and that the degree of misalignment would not impact the robustness of either company's WRMP as misalignment was minor. We have worked with the WRW Regional Group, United Utilities and Severn Trent Water to work towards an aligned approach for the revised draft WRMP. We do not recognise the comments raised around	See Issue 9 sub-point actions

		a lack of evidence that the scheme is environmentally acceptable. Throughout the STT SRO development process we have responded to environmental concerns raised by the Environment Agency and others in RAPID, and have developed mitigation measures to be incorporated into the scheme's design. We are continuing to work through actions raised by RAPID. There is currently no basis on which we feel that the Severn-Thames Transfer option should be screened out on environmental grounds.	

Issue 9.1	River Severn to River Thames transfer. This option relies on enough water of suitable quality in the River Severn to be transferred to the River Thames. This transfer has been subject to a lot of investigations and has been proposed since the 1970s. Currently this transfer is selected in the plan towards 2050. The Environment Agency is not convinced this is a viable solution. We have a number of concerns about its resilience, particularly in a changing cilmate. During the summer of 2022, the River Severn reached very low levels. While the proposals include a number of possible support schemes, for example releases from Lake Vyrnwy, those sources may be required by the donor companies for their own drought resilience. Donors should ensure their own customers are not put at a higher drought risk due to the transfer of water. Given that the River Severn to Thames transfer has not yet been shown to be feasible or environmentally acceptable, the company should ensure alternatives are progressed. Thames Water should ensure any options selected are resilient, reliable and do not cause any adverse environmental impacts.	While we recognise that there will always be further work which could be undertaken in assessing the resilience of water resources schemes, we feel that we have applied a degree of rigour in our assessments of scheme resilience which is appropriate for the current planning process being undertaken. We have assessed the Deployable Output benefit that the Severn-Thames Transfer options (both the unsupported transfer and individual support options) could bring using stochastic datasets, as well as having incorporated climate change impacts, in order to robustly determine the Deployable Output benefit that the STT option could bring. The STT and SESRO are subject to the same DO analysis methods. 'Stochastic' timeseries of utilisation from these DO runs have then been passed to United Utilities and Severn Trent who have used them to derive option costs, in order to ensure that option costs which would be required to enable water sharing are appropriate. While it is true that, during the drought of 2022, there would have been very limited water available for transfer from an unsupported Severn-Thames Transfer (approx. 7 Ml/d across the summer drawdown period), we feel that there are two points which are of relevance: 1. The Severn-Thames Transfer would be developed in order to provide resilience to droughts of 1 in 100-year magnitude and greater. Some of these events involve multi-year drawdown periods for the London WRZ, and had the drought extended into the winter it may have been that the	No changes have been made to the WRMP following this response, as we consider that the development of the STT option is appropriate for this stage of development.

		Severn could have recovered before the Thames, leaving water available for transfer over a critical refill period. Our DO analysis calculates the whole-system benefit that STT options would bring in a 1 in 500-year drought, and so focussing on a single event, while instructive, is not conclusive. 2. Support sources are an important component of the Severn-Thames Transfer - water from Vyrnwy and Minworth would have been available to provide an important source of support. The licensing strategy developed through the STT SRO scheme has given us confidence that a 'Put and Take' agreement would be licensable, and so we can have confidence that water would be available from the STT scheme. While these factors mean that we are confident in the Deployable Output assessment which is undertaken, we do consider the yield of the unsupported STT to be less reliable than that of alternative options, with there being significant variations in year-to-year availability of flows above the HOF. We recognise that there are particular areas of further work which need to be progressed to ensure that we are confident in the scheme's resilience. You rightly point out that climate change has the potential to negatively impact the scheme's resilience, and we will ensure that we continue to look into this through scheme development. As part of Gate 3 work, we are also looking to further investigate the coherence of drought events in the 'stochastic' datasets used in WRSE and WRW analyses, in order that we can model the STT	

		system as a whole. We do not recognise the comments raised around a lack of evidence that the scheme is environmentally acceptable. Throughout the STT SRO development process we have responded to environmental concerns raised by the Environment Agency and others in RAPID, and have developed mitigation measures to be incorporated into the scheme's design. We are continuing to work through actions raised in the Ofwat Gate 2 Final Determination. There is currently no basis on which we feel that the Severn-Thames Transfer option should be screened out on environmental grounds.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Issue 9.1	The company should also continue its work on the feasibility of the Severn Thames transfer and mitigation identification. Given that the River Severn to Thames transfer has not yet been shown to be feasible or environmentally acceptable, the company should ensure alternatives are progressed. Thames Water should ensure any options selected are resilient, reliable and do not cause any adverse environmental impacts. Thames Water should: • ensure that the actions identified for the RAPID mid-gate check points are progressed sufficiently and any changes are reflected in the plan • Continue to progress alternative options to STT to ensure these are available for selection if required	As described in other responses to points raised in the consultation response, while we recognise that there is more work to do in assessing the STT scheme's resilience and in ensuring that all mitigation measures are fully developed to ensure environmental acceptability, we do not agree that the scheme has yet to be shown to be environmentally acceptable or viable from a resilience perspective. We will, however, of course ensure that actions identified by RAPID are progressed sufficiently, and will report on this as a matter of course through the RAPID process, and will continue to develop other water resources options, should the STT or other options be found to be infeasible.	No changes have been made to the WRMP following this response, as we consider that the development of the STT option is appropriate for this stage of development.

Issue 9.2	The Severn-Thames Transfer (STT) and its supporting elements are selected in the preferred pathway 4 from 2050 onwards. We have concerns regarding the operation and yield of this scheme, although there is still time to address this given the timing of selection of the scheme. There appears to be inconsistency between WRSE's and WRW's regional plans in the components that make up the STT preferred option, as well as inconsistency in how it is represented in both timing and size in United Utilities and Severn Trent Water's plans. We are aware that this was due to a mis-alignment in timetables at the second round of regional reconciliation. Thames Water should: • work with United Utilities, Severn Trent Water as well as WRSE and WRW to ensure consistent assumptions for the STT and all supporting elements, and confirm its viability before final plan • consider any changes in the scheme as a result of consultation responses on the regional plans and WRMPs and update its plan accordingly • ensure latest costs are used in regional modelling • ensure appropriate mitigation is identified in making the option viable • ensure that the actions identified for the mid gate check points are progressed sufficiently and any changes reflected in the adaptive planning	While we recognise that there will always be further work which could be undertaken in assessing the resilience of water resources schemes, we feel that we have applied a degree of rigour in our assessments of scheme resilience which is appropriate for the current planning process being undertaken. As is pointed out, there is still time to work on confirming the assessment of the scheme's Deployable Output benefit, with the scheme not scheduled for imminent construction. We recognise that there are particular areas of further work which need to be progressed to ensure that we are confident in the scheme's resilience. You rightly point out that climate change has the potential to negatively impact the scheme's resilience, and we will ensure that we continue to look into this through scheme development. As part of Gate 3 work, we are also looking to further investigate the coherence of drought events in the 'stochastic' datasets used in WRSE and WRW analyses, in order that we can model the STT system as a whole. We have worked hard as part of the STT SRO group, and as part of the WRSE Regional Group (which undertakes 'Regional Reconciliation'), to ensure that our view of the STT option is as aligned as it can be in our respective Regional Plans and WRMPs. It has been very difficult, given the challenging timescales for production and publication of RPs and WRMPs, to ensure full alignment. As an example of these difficulties, Water Resources West stated a need for a confirmed position on the Severn-Thames Transfer options selected in the WRSE region's final plan (as	Changes made to the rdWRMP24 are: - With the achievement of the 110 l/h/d by 2050 target underlying our rdWRMP24, the STT no longer forms part of our preferred plan. - The STT is, however, still an important part of our overall adaptive plan, and would be an alternative option which we would progress if SESRO were found to be infeasible, or be denied planning consent.

	• undertake a sensitivity test to understand the impact of this option not being available or being available with different timing or configuration on the WRMP option selection	part of the third round of reconciliation) before the end of the Thames Water WRMP consultation, in order to facilitate the development of the WRW plan - something which WRSE and TW could clearly not provide with confidence. We feel that a degree of misalignment in WRW/WRSE RPs and associated companies' WRMPs is to be expected given the exceptionally challenging timescales and complex methods used in the development of WRMPs and Regional Plans, and that the degree of misalignment would not impact the robustness of either company's WRMP as misalignment was minor. We have worked with the WRW Regional Group, United Utilities and Severn Trent Water to work towards an aligned approach for the final WRMP. We have ensured that the cost estimates for the STT scheme and support sources are up to date, and have incorporated the costs of all mitigation measures identified into the scheme's cost. Between the draft and revised draft WRMP submissions, we have updated the availability of support from Vrywny. Analysis of supply-demand balances in the WRSE region demonstrates that licence reductions associated with 'Environmental Destination' would leave insufficient supply during a 'normal year' scenario in several WRZs in the WRSE region - the Vyrnwy source of support could not be used in a 'normal year' situation, and so the scheme has been ruled out for use in this situation. With the achievement of the 110 l/h/d by 2050 target underlying our rdWRMP24, the STT no longer forms part of our preferred plan. As such,	

		conducting a sensitivity test where it is excluded was not required.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 1: Update household and non-household forecasts with latest COVID19 modelling or justify why this is not appropriate			
Improvement 1	Improvement 1: Update household and non-household forecasts with latest Covid-19 modelling or justify why this is not appropriate	See improvement sub-points	See improvement sub-points
Improvement 1.1	Artesia has stated in the Non-Household Demand Forecast Appendix G, Section 6, that Thames Water should update its modelling of the COVID19 pandemic to reflect the latest data available in the final non-household demand forecast. However, it appears Thames Water has not updated its modelling of the COVID19 pandemic on non-household demand, therefore resulting in potential inaccuracy within the non-household demand forecast. Thames Water should update the baseline and scenario forecasts with the latest COVID19 modelling to demonstrate the impact of the pandemic on non-household demand, or ensure it provides evidence and clearly justifies why this is not appropriate.	We are unable to update due to the ONS changes to GVA invalidating models that were developed and therefore there have been no changes from draft WRMP to rdWRMP except for base year.	No changes for the reasons identified

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 1.2	Thames Water has included the impacts of COVID19 in its headroom assessment rather than the baseline demand forecast. The company states that this is due to the uncertainty of the long-term impacts. Whilst we acknowledge the uncertainty associated with these impacts, we would expect further information to be provided on the assumptions used in the headroom assessment, including changes in volume, location and work patterns. Thames Water should provide further information on the assumptions used when considering impacts of COVID19 on demand in its headroom assessment, including changes in volume, location and working patterns, detailing how this has been applied across the planning period.	The reason that we have incorporated this factor into Target Headroom is because there is a great deal of uncertainty around the long-term changes that will result from the COVID-19 pandemic. At the time of writing we have not even 1 single whole year of demand data that is unaffected by COVID restrictions. It will take years to begin to understand longer term impacts. We have included a prudent uncertainty allowance based on judgement within headroom as it is unknown what longer term impacts will be. These will be reviewed but longitudinal data is required to better understand this.	Between dWRMP and rdWRMP, we have re-based our demand forecast to the AR22 reporting year, which will mean that the impacts of the COVID19 pandemic are factored into our base year. We have not amended the baseline demand forecast or approaches taken in Target Headroom, as we consider that our existing methods and narrative is appropriate.
Improvement 10: Ensure the company's revised draft plan takes account of any decisions on its scheme acceleration proposals where applicable			
Improvement 10	Improvement 10: Ensure the company's revised draft plan takes account of any decisions on its scheme acceleration proposals where applicable	See improvement sub-point	See improvement sub-point
Improvement 10.1	The company has submitted one or more schemes to be considered for acceleration in the remainder of AMP7. A government announcement around the outcome of this acceleration process is expected in March. The company should ensure the revised draft plan takes	We have reviewed the government report that has allocated £1.6Bn to the water industry. We have not received funding due to the options included being new and having low levels of detail.	No changes for the reasons highlighted.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	account of any decisions on its scheme acceleration proposals where applicable.		
Improvement 11: Ensure that alternative options outside the preferred pathway are sufficiently progressed that they could be used if required through the company's adaptive plan			
Improvement 11	Improvement 11: Ensure that alternative options outside the preferred pathway are sufficiently progressed that they could be used if required through the company's adaptive plan	We appreciate that concerns exist around several of the options in our WRMP. We will continue to develop options that could be used in our WRMP, with a particular focus on those which are present in alternative plans.	Changes made are discussed in reference to individual points raised below.
Improvement 11.1.1	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that discharge of a very large volume of treated water into the river Lea is assessed as it is likely to change the physiochemical nature of the watercourse and thus the aquatic fauna/flora. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed should they be required through adaptive planning. We expect the company to undertake	The treated water from the Beckton and Crossness desalination options would be conveyed via a tunnel to Coppermills WTW, where it would be blended with water from Coppermills WTW prior to distribution. Blending will mitigate the risk of customers' perception of a difference in the taste of the water when the desalination plant outputs are increased during droughts. No treated water from the desalination options will be discharged to the River Lea and therefore there will be no impact from additional discharges into the river.	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	assessment of the impact of the additional discharge into the River Lea		

Improvement 11.1.2	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that investigation into the in-combination impacts with other options considers impact on Marine Conservation Zone and Tentacled Lagoon Worm which is sensitive to salinity changes. Southern Water has desalination option at Swanscombe and therefore there is a need to consider in combination impacts, especially the hypersaline discharges. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed should they be required through adaptive planning. We expect the company to undertake in combination investigation into the in-combination impacts with other options considers impact on Marine Conservation Zone and Tentacled Lagoon Worm.	A review of the Middle Thames Tideway cumulative effects of reuse, desalination and direct river abstraction was undertaken at WRMP19. This review indicated that more than a 15 to 20% reduction in freshwater inputs (275-366Ml/d, taken up by options) could result in salinity regime modification in the Middle Tideway. The WRSE regional investment model, therefore includes a cumulative limit of 366Ml/d for options which would reduce freshwater inputs to the Tideway (Beckton Recycling, Deephams Recycling, Beckton Desalination and Crossness Desalination). Further work is ongoing as part of the London Recycling SRO to refine this limit. With respect to the MCZ and Tentacled Lagoon Worm, the WRMP19 report concluded that there was uncertainty in terms of the future ecological baseline of the Thames Tideway as combinations of schemes would potentially be decades in the future. The MCZ for the Thames Tideway for European smelt, European eel and Tentacled lagoon worm could result in an up to minor impact in future. In addition, the Thames Tideway estuary is currently recovering from historic pollution, which may mean that more sensitive species could have re-settled by the time the schemes are operated together, resulting in a medium impact in future. Modelling of the Beckton Reuse scheme showed that a 300Ml/d reduction in Beckton final effluent discharges would see changes in salinity of <0.6‰ during operation at the MCZ, leading to a salinity range at the MCZ of 15.6 – 24.0‰. This represents a negligible change from baseline salinity range and is well within the known salinity	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.

		range for tentacled lagoon worm (5 - 48‰). Brine discharges from our desalination options would be significantly diluted by the final effluent discharges from the adjacent sewage treatment works. Beckton desalination is estimated to increase salinity by between 0.2 and 0.4‰ locally with the Crossness option raising salinity by 0.5 to 0.9‰. To put these values into context, Tideway salinity varies over and between tidal cycles from 0.2 to 14.7‰ at Beckton and 0.4 to 16.4‰ at Crossness, depending on freshwater flows and tidal state. The ecology of the Tideway in this reach is generally resilient to salinity change and consequently the options will have little influence on salinity within the local receiving environment, or smother local biota.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 11.1.3	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that ensure concerns with the abstraction proximity to storm discharges and final effluent from Beckton sewage treatment works and Tideway combined sewer outflows are considered, and high energy consumption. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed should they be required through adaptive planning. We expect the company to address concerns around proximity to existing storm discharges and combined sewer outflows.	The estuarine water abstraction point for both Beckton desalination and Crossness desalination, will be located upstream of the existing Beckton Gateway desalination plant intake, the storm discharges and final effluent from Beckton sewage treatment works and Tideway combined sewer outflows. To ensure that the raw water is of low salinity, pumping will take place over a 3-hour period, on the ebb tide, to abstract the freshwater element of the freshwater / seawater interface. Energy consumption for the desalination options has been taken into account as part of the programme appraisal. The desalination options, if selected, are selected in the alternative pathways in 2050 or beyond. Further development of the options, including further investigations of the environmental impacts will be undertaken as part of the delivery of the options. We will also incorporate any relevant assessments from the Beckton Recycling option (e.g. cumulative limits and salinity impact) in the desalination option development.	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.
Improvement 11.1.4	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that any new or adjusted intakes would need correct screening for fish and eels. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed	The conceptual design for both Beckton Desalination and Crossness Desalination includes eel screens on the intakes. If these options progress, we will work with the EA to ensure that appropriate screening is provided.	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	should they be required through adaptive planning. We expect the company to ensure any adjusted or additional intakes are designed with correct screening for fish and eels.		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 11.1.5	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that the exact proposed location of the Crossness option is unclear from the information provided, though presumed to be within, or adjacent, the existing Thames Water site. Although Crossness benefits from a level of flood alleviation from tidal flooding, a residual risk of flooding remains. New works at this location would need to adequately assess the flood risk over the lifetime of the development and resolve/mitigate any associated matters to demonstrate it is an acceptable location. Beyond the general flood risk to the site/surrounding area, or flood impacts from the development, consideration should also be given as to whether it will be feasible to continue to safely operate a plant at such a location if services are lost, or staff cannot access the site. For example, electricity, gas supply, or vehicle movements could be impacted, or flood water ingress into pipes could be experienced. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed should they be required through adaptive planning. We	The proposed desalination site is to the south of Crossness STW, within flood zones 2 and 3. These land areas are protected by natural or engineered flood defences. The conceptual design is based on the current level of flood protection being maintained or enhanced as required. We note that the Thames Estuary 2100 plan recognises the opportunities to improve flood risk management arrangements as the area is redeveloped. We would work with the Environment Agency to identify these opportunities, if the desalination option progresses. The Crossness desalination was selected in one of the alternative pathways of our draft Best Value Plan to be operational from 2061 but is not included in our rdWRMP24. A flood risk assessment would be undertaken as part of the option development. Given this option is selected several decades in the future, we consider that it is appropriate to undertake a flood risk assessment closer to when the option is needed at which time uncertainties around climate change impacts on flooding will be reduced.	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	expect the company to consider the flood risk appropriately by undertaking flood risk assessment to demonstrate that the site can, in principle, be safely developed and operated over its lifetime for this purpose.		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 11.1.6	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that the future of flood alleviation measures benefitting Crossness are being looked at within our Thames Estuary 2100 plan. Works of some form to pumping stations and / or flood walls are likely to be required over the lifetime of a new desalinisation plant. It would, therefore, be beneficial for us to look together to see whether there are opportunities to align objectives to collaborate, should the proposed option be assessed as suitable. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed should they be required through adaptive planning. We expect the company to work with EA to ensure existing flood alleviation work planned for Crossness site through Thames Estuary 2100 programme is aligned with this option.	The Crossness desalination was selected in one of the alternative pathways of our draft Best Value Plan to be operational from 2061 but is not included in our rdWRMP24. Should the option be progressed in the future, we would work with the Environment Agency to identify opportunities to align objectives. We welcome the opportunity to work with EA to ensure that flood alleviation work planned through Thames Estuary 2100 programme is aligned with this option, should it be required in the future.	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.

Improvement 11.1.7	Thames Water's plan selects Beckton and Crossness desalination options in pathways other than the preferred pathway. Further work is required regarding understanding the environmental impact of these options to ensure that there are numerous desalination schemes across the water companies in the WRSE area. There is a need for water companies to work together to see if efficiencies and improvements can be made in combining proposals for desalination, rather than the current plans which show multiple separate schemes delivered at different times. The company should ensure that alternative options outside the preferred pathway are sufficiently progressed should they be required through adaptive planning. We expect the company to work with other companies to undertake in combination impact assessments between the proposals of the different companies for Desal options.	A review of the Middle Thames Tideway cumulative effects of reuse, desalination and direct river abstraction was undertaken at WRMP19. This review indicated that more than a 15 to 20% reduction in freshwater inputs (275-366Ml/d, taken up by options) could result in salinity regime modification in the Middle Tideway. The WRSE regional investment model therefore includes a cumulative limit of 366Ml/d for options which would reduce freshwater inputs to the Tideway. Further work is ongoing as part of the London Recycling SRO to refine this limit. The desalination options, if selected, are selected in the alternative pathways in 2050 or beyond. Further development of the options, including further investigations of the environmental impacts will be undertaken as part of the delivery of the options. We will also incorporate any relevant assessments from the Beckton Recycling option (e.g. cumulative limits and salinity impact) in the desalination option development. We acknowledge that in addition to our Beckton and Crossness desalination options, there are other desalination options included in the Thames estuary and the wider WRSE region. The combination impacts of these options are being reviewed and will be included in the revised draft WRMP. We will continue to work with other water companies to identify opportunities for combining options that are included in WRMP24. We would not be able to fully identity and assess opportunities in the short amount of time between	No amendments have been made to the plan as a result of this point for the reasons detailed in our consideration. We will continue to investigate the feasibility of the Beckton Reuse, Beckton desalination, and Crossness desalination schemes.

		the dWRMP and rdWRMP, but will consider this in WRMP29.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 11.2	The draft plan states that the Horton Kirby additional abstraction option is not selected until 2050 under the preferred plan. From local liaison we are aware that this site is currently being pump-tested, and therefore could be available much sooner in the planning period. Therefore, further explanation should be provided on why the scheme is not selected sooner in the planning period. Thames Water should provide further explanation for why the Horton Kirby option is being delayed in its utilisation within the preferred plan despite work taking place now regarding its development. Thames Water should provide further explanation for why the Horton Kirby option is being delayed in its utilisation within the preferred plan despite work taking place now regarding its development.	As per our recent Annual Reviews of WRMP19, delivery of the Horton Kirby ASR option has been deferred out of AMP7, though ongoing testing and design work continues. Due to uncertainty over whether the option would be delivered, we considered the Horton Kirby as an option within our WRMP24 to establish when the option would be delivered as part of a Best Value Plan. If the Horton Kirby option is to be delivered, it will be from base expenditure rather than being associated with additional enhancement expenditure requests. As such, we have chosen to accelerate delivery of this option when compared to outputs from our investment modelling, leading to enhanced resilience for our customers.	A change in our WRMP is that, in our rdWRMP, The Horton Kirby ASR scheme will be delivered during AMP8, in order to provide resilience to our supplies in AMP8 and beyond, acknowledging the risks around achievement of demand management objectives.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 11.3.1	The Thames Water Drainage and Wastewater Management Plan has proposed Sevenoaks wastewater treatment works, and within the context of that plan it is flagged as a potential improvement to water resources. It is not clear if this has been considered in the WRMP, however, it appears to have been mentioned in the Regional Plan. • Clarify whether it has considered the option of additional deployable output benefit from Sevenoaks water treatment works	A new sewage treatment works near Sevenoaks has potential for multiple benefits, environmental net gain, and partnership working. The increase in flows in the River Darent could potentially offset the need for some licence reductions at our existing abstractions on the River Darent, however it is recognised that discharging to a chalk stream would require very low/no spills and a high-quality effluent. We have not assessed the option as one which could provide a water resources benefit, as this would involve the development of a new surface water abstraction on the River Darent, something which we consider the Environment Agency would be unlikely to license. Our WRMP / DWMP teams will continue to work together to develop this option and understand the potential benefits, and we may consider this option in the AMP8 Environmental Destination WINEP investigation and/or as a 'catchment option' in WRMP29.	Between dWRMP and rdWRMP we have amended Appendix Y (DWMP-WRMP alignment appendix) to correct the wording around the potential benefit of the Sevenoaks STW effluent redirection

Improvement 11.3.2	It is not clear if there has been a re-examination of the water pumped to the Thames from the Bluewater/associated quarries as a potential water source even if it requires suitable new or upgraded water treatment facility. This could provide additional water without the need to take more groundwater . Thames Water should: • Confirm if the deployable ouput benefit was considered from the Bluewater quarries for supply.	We have not considered use of the "Bluewater Quarries" or associated de-watering operations as a water resources option in WRMP24. The EA reference here is to quarries which are located between Dartford and Swanscombe, next to the Bluewater shopping centre, and the de-watering operation being undertaken, with water currently being discharged into the River Thames. Targeting water otherwise destined for de-watering was the rationale behind the development of the Bean Wellfield. Development of this wellfield allowed for reductions in abstraction at Horton Kirby and Eynsford, as part of the Darent Action Plan. It was decided that, rather than using de-watering water directly (due to concerns over water quality), it would be preferable to intercept water flowing northwards towards the quarry (otherwise largely destined to be de-watered). It is worth noting that the EPM Southfleet and Greenhithe would disaggregate two wells from the current Bean Wellfield licence, to allow for 9 Ml/d of further abstraction. The boreholes associated with EPM Southfleet and Greenhithe are within close proximity to the quarry and extend the concept of intercepting water that would otherwise be subject to de-watering operations. We recognise that there may be other de-watering operations ongoing in this area and we may consider further options in this area going forward. We would, however, primarily look to expand the	We have not made any changes to our WRMP24 as a result of this comment, as we do not consider that making use of de-watering water from this quarry warrants consideration in WRMP24. We may consider further options in WRMP29.

		current concept of intercepting water prior to de-watering, rather than making use of water actively being de-watered.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 11.4	The Thames/Lee Tunnel Extension option is included in the rejection list but no reference to the stage or reason for rejection in Appendix Q, page 11. The present arrangement solely supplies the Walthamstow Reservoir Group. These are the smaller volume reservoirs. It appears it is possible to supply the Chingford Reservoirs, but it is no longer selected. This limitation became apparent when Kings George V Reservoir was unavailable. The lack of a viable connection to the Thames/Lee Transfer could have helped solve the refill issues subsequently experienced. Thames Water should: provide clear reason for rejecting the option explore engineering solution to maximise the transfer volumes from the Thames to the Lower Lee (Chingford) reservoirs group	The Thames / Lee Tunnel (TLT) Extension is a tunnel from the end of the TLT at Lockwood to the River Lee Diversion channel upstream of the King George V reservoir intake. It comprises part of the treated water conveyance for Beckton Recycling, along with the Beckton to Lockwood tunnel. It also has the potential to transfer water from the TLT, River Lee DRA (rejected option) and Deephams Reuse to the River Lee Diversion channel. The TLT Extension is not rejected in our WRMP24 (dWRMP or rdWRMP). The new river abstraction from River Lee at Three Mills Lock (River Lee DRA) and transfer to Lockwood Thames-Lee Tunnel Extension is rejected and is therefore included in Appendix Q. River Lee DRA is rejected in comparison with the Deephams reuse option to which it is mutually exclusive.	We have not made any changes to our WRMP as a result of this point, as this is a point of misunderstanding
Improvement 12: Correct errors in the company's data tables			
Improvement 12	Improvement 12: Correct errors in the company's data tables	Thank you for the comments on how we have presented our plan in tabular form. We have considered the points raised individually.	Changes made are discussed in reference to individual points raised below.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 12.1	Thames Water has presented a variable baseline deployable output in its planning tables up to 2040, and appears to have adjusted baseline deployable output according to reduced levels of service provided in each year up until 2040. This is in conflict with the Water Resource Planning Guidelines (WRPGs) and table instructions, which requires baseline deployable output before reductions (6BL) to present a 1 in 500 year supply resilience across the planning horizon. The company should ensure that baseline DO (6BL) is presented to reflect 1 in 500 year supply resilience from the first to the last year of the planning horizon, in the revised WRP Tables. Reductions to levels of service before 2040 should be presented as an option, with the DO 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 Water Available For Use 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	In the draft WRMP, we stated our baseline Deployable Output as being subject to a time-variant Level of Service (1 in 100-year resilience up to 2031, 1 in 200-year resilience up to 2039, and 1 in 500-year resilience from 2040 onwards). While we recognise that this was not fully aligned with the Water Resources Planning Guideline, we did this in order to present a Baseline supply-demand balance in a manner which would be least confusing for stakeholders. We are not currently planning to have a '1 in 500-year' Level of Service in all Water Resource Zones and thought that it would be confusing for stakeholders to see large deficits in several WRZs from the beginning of the planning period. We understand that Ofwat and the Environment Agency wish for our Baseline Deployable Output to be stated as being subject to a 1 in 500-year Level of Service throughout the planning period, and that the Water Resources Planning Guideline has been updated, strengthening the wording around this point. As such, we have made this amendment in our Revised Draft WRMP24.	In respect of changing the way that our baseline DO is presented, the DO figures presented in our baseline supply-demand balance are aligned with presenting a 1 in 500-year Level of Service throughout the planning period. As requested in this consultation response point, we have added options associated with reduced Levels of Service.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	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 tables.		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 12.2	Thames Water has presented total benefits of drought permits for each water resource zone in Table 6F of the planning tables, which makes it difficult to compare to the volumetric savings expected to those presented in the Thames Water's Drought Plan 2022. Thames Water should ensure that Table 6F is updated and the benefits from individual drought permits are itemised and align with the relevant information presented in its drought plan.	The drought permit benefits stated in Table F are aligned with the large Table in Appendix C of the Drought Plan. The drought permits included for each WRZ are listed in the "description" column in Table 6. With the exception of London, the values stated in Table 6 are aligned with values in Appendix C of the drought plan. For the London WRZ, the aggregated benefit of all drought permits was calculated with a DO run. As such, we do not have the information to split out the DO benefit afforded by each individual drought permit option.	We have not made changes to our WRMP following this consultation response, as we consider that the information presented is sufficient to comply with the Water Resources Planning Guideline and Tables guidance.
Improvement 12.3	In Table 1a of the WRMP planning tables the groundwater licence Hawridge 28/39/28/0238, has been included under baseline licences. However, this licence is only due to be available until the end of AMP7 and so would not form part of the AMP8 baseline. Thames Water should update Table 1a in the planning tables to accurately reflect the deployable output of the licences at the start of the planning period.	The base position for the draft plan is AR20, therefore licences that were available at AR20 are included in Table 1. The deployable output from Hawridge is included within line 6BL in Tables 3a and 3d (TWSSWA), but is subsequently adjusted in line 7.2BL to take account of the sustainability reduction.	Between draft and revised draft, the forecast has been re-based in AR22, and Table 1 will therefore include licences that were available at AR22. The closure of Hawridge is expected to be deferred into AMP8, and the updated timing will be reflected in line 7.2BL in Tables 3a and 3d.
Improvement 13: Consider reducing outage or justify why it cannot			
Improvement 13	Improvement 13: Consider reducing outage or justify why it cannot	Thank you for the points raised on our long-term allowances for outage and headroom. We have considered these individually.	Changes made are discussed in reference to individual points raised below.

Improvement 13.1	In Section 4.82 Thames Water states that "We have not considered reducing outage allowance across the planning period because, while we may resolve some root causes of outage issues, other assets, new or old, may experience outages that compensate for outage reductions that we might achieve." However, given the new large supply options such as the construction of a reservoir, it is not clear how Thames Water has made a provision for outage for this option. There is no step change to reflect the new option nor justification for not increasing the outage allowance at the point of delivery of that scheme. The outage allowance for SWOX in Table 4.14 in Section 4.98 shows that the outage allowance has reduced by 10 Ml/d compared to the WRMP19. This is particularly concerning as outage at a company level as shown in the final planning Table 2e is kept constant after 2022–23 across the planning period at 105 Ml/d which is 5 Ml/d larger than the WRMP19. The London zone has a lower outage figure of 75 ML/d than WRMP19 for the period 2025-2030 which was ~100 Ml/d. While we understand the reduction of ~30ML/d is linked to the Gateway Desalination's deployable output being temporarily reduced, there is a corresponding increase of only 5 ML/d from 2030-2031 onwards, when desal is expected to be available at post AMP8. Thames Water should:	Our consideration is that outage allowance should be a reasonable planning allowance made to ensure the resilience of the supply-demand balance. Calculation of outage allowance is based on sampling of historical events. When combined, outage allowance and headroom should provide a reasonable buffer between supply and demand. We have not considered reduction of outage allowance as a water resources option, as we could not confidently provide an investment plan which we could adopt as a resilient water resources option. We have not incorporated an increased outage allowance associated with new options. Instead, we have included a monitoring plan in our rdWRMP which involves consideration of future risks in the round. Our dWRMP24 data tables represent what we consider to be a correct and transparent representation of anticipated changes in the Gateway WTW WAFU contribution.	We have not made changes to our plan following this response as we consider that the methods usedi in our dWRMP were adequate

	• explicitly state if other options to reduce outage have been considered, providing an adequate justification where the options are not included in the preferred plan • clearly explain within the plan how the company plans to reduce outage over the planning period to maintain the static outage allowance • amend its data tables to reflect the assumptions around future Gateway Desalination operation • ensure new options have appropriate outage allocation in line with industry best practice for the type of option • clarify whether the impact from new options is captured within outage or headroom components		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 14: Provide missing drought permit option dossiers			
Improvement 14	Improvement 14: Provide missing drought permit option dossiers	Discussion in relation to sub-point	See sub-point
Improvement 14.1	The details for the following drought permit option dossiers in Appendix R are not presented: Gatehampton, Playhatch, Harpsden/Sheeplands. It would be helpful to understand the details of how these options operate as part of the programme. Thames Water should provide details of the drought options as part of the constrained list dossiers in Appendix R. Thames Water should provide details of the drought options as part of the constrained list dossiers in Appendix R.	As a response to this comment, in rdWRMP we will provide details of the drought options as part of the constrained list dossiers in Appendix R for Gatehampton, Playhatch, Harpsden/Sheeplands. These options are set out in our Drought Plan and an EAR (Environmental Assessment Report) has been developed for each option and included as an appendix to our Drought Plan. In each case the drought permit option would enable more water to be abstracted than allowed under the existing licence but this would only be required in the event of a serious drought of greater than 1:20 year severity.	In response to this comment, rdWRMP options dossiers have been updated in Appendix R to include a summary of the details of how these options operate as part of the programme.
Improvement 15: Provide assurance that the RWE Didcot licence trade is deliverable			
Improvement 15	Improvement 15: Provide assurance that the RWE Didcot licence trade is deliverable	Discussion in relation to sub-point	See sub-point
Improvement 15.1	The RWE Didcot licence trade is included in the preferred plan up until 2075. However, there is limited commentary around the risk of this third-party agreement over these timescales, and in the plan it is presented as a key resource in the case of demand reduction performance limitations. Thames Water should provide further details and	The RWE Didcot licence trade is only available until 2030, however this end date was not included in the information provided to WRSE for the draft regional plan and therefore this option has been selected in dWRMP24 beyond 2030. Updated availability dates have been provided to WRSE and in the rdWRMP24 Didcot Licence trade is not selected beyond 2030.	In our rdWRMP, the RWE Didcot licence trade is selected in our best value plan for use in the period 2026-30. This is a change from our dWRMP where it was selected until 2075.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	assurance of the security of this option over the timescales proposed.		
Improvement 2: Improve some modelling assumptions and explain how new modelling compares against the company's previous supply model			
Improvement 2	Improvement 2: Improve some modelling assumptions and explain how new modelling compares against the company's previous supply model	We appreciate the need to more fully document assumptions made in our supply forecast modelling, and the need to better explain the progression of our modelling tools.	Changes made are discussed in reference to individual points raised below.
Improvement 2.1	Thames Water has used a new Pywr model for its supply modelling for WRMP24. However, there is limited explanation of how the new modelling has evolved from previous IRAS, Aquator and WARMS modelling. More explanation should be provided to ensure that the use of Pywr outputs is appropriate. Section 4 states that the validation for the Pwyr models is described briefly but lacks detail on how the Pwyr models can replicate the IRAS and WARMS2 models. Thames Water should include a summary of the evidence to show how the new model performs against its previous supply models and explicitly state any limitations and/or biases and how these risks are accounted for.	We recognise the need for more detail to be provided associated with the validation of our water resources modelling.	Appendix I has been updated to include more description of the link between our different water resources models, and the validation of the Pywr model.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 2.2	During pre-consultation, we liaised with Thames Water regarding the future use of the West Berkshire Groundwater Scheme (WBGWS), highlighting that its availability beyond 2060 was uncertain. However, the risk around the inclusion of WBGWS in the company's baseline supply forecast post 2060 is not addressed. The company has had confirmation from the Environment Agency of asset operation/maintenance until 2060. However, the assumption that it would be available after 2060 at the same volume is a risk that does not appear to be mitigated, and therefore its impact on option selection post 2060 is not understood. Section 11.292 states that Thames Water has not explored a scenario without WBGWS. The company should reflect on the risk post its last use in 2022. Thames Water should undertake sensitivity testing for a scenario on the WBGWS not being available post 2060 and clearly outline a decision point by which any alternative options will be required. The company should reflect on the risk of this options following its last use in 2022 and update its plan to reflect any changes as a result of its use.	We agree that sensitivity tests for WBGWS are useful.	Sensitivity Test We have conducted sensitivity tests on the availability of WBGWS in the longer-term for the revised plan, with its contribution curtailed in 2040 and 2050. We have detailed the results of these sensitivity tests in Section 10 of the rdWRMP24.

Improvement 2.3	During the drought of 2022, there were concerns raised regarding the representation of the Thames reservoir system in Thames Water's supply modelling and whether it reflected actual operation of abstractions in low flow events. There was concern raised regarding the pump capacities and the ability to maximise abstraction at low flows. There were cases in 2022 when abstraction could have taken place but did not due to pump capacity not being flexible enough to change abstraction rates when needed, therefore impacting reservoir storage and security of supply and potential risk to environment. There was also concern regarding the integrity of the London resource zone, with reservoirs having diverging storage volumes during 2022 despite the zone being integrated, indicating a potential issue with the ability to distribute water across the zone. This is a potential issue for more extreme drought events in the future. Thames Water should: • review its supply model ensuring that its assumptions reflect actual operational constraints • confirm that its London resource is integrated, and identify any remedial / resilience actions if necessary • consider improving its ability to manage abstractions flexibly for the Thames reservoir system, ensuring security of	We learnt a great deal from the 2022 drought, and have summarised our learning points in the 2022 Drought Appendix in our rdWRMP, as required by the updated WRPG. We recognise that greater flexibility in our ability to abstract would have been useful last year. It is our consideration, however, that the causes of inflexibility witnessed last year are not yet clear. It could be that Thames Water's operations were not sufficiently flexible, or it may be that the Environment Agency's operation and management of the River Thames was part of the problem. We are also currently unsure whether 2022 was a sufficiently typical drought event to be considered in our planning. We recognise the need to consider the integrity of our raw water network, although we do consider that our treated water network is broadly integrated, with the ring main providing a high degree of integration. Regarding our modelling, we are looking to undertake an investigation to determine whether there are additional constraints which should be incorporated into our water resources modelling to adequately capture constraints on our abstraction. This is discussed in detail with reference to our revised monitoring plan and short-term investigations. In addition to this investigation, Appendix CC details there are two modelling improvements which we may make between WRMP24 and WRMP29.	For the rdWRMP24, we have produced a new "2022 Drought Appendix" in which we summarise the learnings from drought and future improvements to consider in our planning as a result.

	supply is maximised whilst also minimising the impact on the environment		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 3 Consider uncertainty in the carbon assessment			
Improvement 3	Improvement 3: Consider uncertainty in the carbon assessment	Please see response to Issue 15.1	Please see response to Issue 15.1
Improvement 3.1	It is stated that carbon emissions and costs have been calculated using WRSE/ACWG (All Company Working Group) Cost Consistency Methodology; however, this is not a standard model. There is no mention of PAS 2080 or any other methodologies. It is not clear whether any policy or framework has been followed in whole life carbon assessment. It is also unclear whether uncertainties associated with carbon data have been considered. Thames Water should: • provide further clarity on the methodologies that have been considered. • report that there is a level of uncertainty associated with carbon data and the plan on how to minimise it • perform whole life carbon assessment for all option using a standard methodology or carbon tool or provide further information regarding the method they used • ensure a whole life carbon assessment has been undertaken	Please see response to Issue 15.1	Please see response to Issue 15.1

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 4: Make improvements to the Strategic Environmental Assessment, including stating how the company has addressed comments from statutory consultees and explaining the methodologies used more clearly			
Improvement 4	Improvement 4: Make some improvements to the Strategic Environmental Assessment, including stating how the company has addressed comments from statutory consultees and explaining the methodologies used more clearly	See below sub-points	See below sub-points
Improvement 4.1	In Thames Water's SEA Environmental Report, table B1 sets out the scoping report responses received from Historic England, Natural England and the Environment Agency. Thames Water hasn't produced a separate scoping report, instead utilising the Water Resources South East (WRSE) Scoping Report. It is not clear from the responses to these comments within Table B1 whether they have been addressed within the Thames Water's WRMP SEA or the WRSE SEA. The comments have however, been appropriately addressed. Table 3-1: Post-consultation SEA Methodology Assessment Framework details the comments that were received, but it is not clear what has been updated in light of consultation comments received on the WRSE Scoping Report. Thames Water should:	In response to this comment, within the rdWRMP24 SEA we have made it clearer that we have used the WRSE SEA framework that was updated in response to the statutory consultation. We have also signposted within Table B1 as to what parts of the SEA framework were updated in response, as appropriate. Use of the WRSE SEA framework for our draft plan is another way in which our plan is cascading from the regional plan to ensure alignment. We have made this clearer in the revised draft plan SEA in response to this comment. The SEA of our draft plan has also been informed by local baseline data as relevant.	Changes to our WRMP have been made as indicated by our consideration. See rdWRMP24 Appendix B

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	• update table B1 in Appendix B of the Environmental Report to signpost where comments received from the statutory consultees have been addressed. This will ensure that all comments have been adequately addressed • provide further explanation/ justification on the use of the regional WRSE Scoping Report in the Environmental Report		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 4.2	In Thames Water's SEA Environmental Report, section 1 sets out the content and context of both the Thames Water WRMP and the regional WRSE plan, how they have been produced in parallel and the overarching objectives of the WRSE plan. This provides a good broad overview of the WRMP. However, the WRMP doesn't appear to have any overarching objectives, hence why the SEA does not include these. Without a clear understanding of the plan's key objectives and aims, it is difficult to ascertain the appropriateness of the SEA objectives and establish the basis on which alternatives are considered reasonable and discounted. Thames Water should: • provide a clear list of overarching objectives and aims for the WRMP within the plan • include the WRMP objectives within the Environmental Report	Our primary aim in the production of our WRMP is to ensure a resilient water supply for all of our customers, now and in the future, while protecting and enhancing the environment. However, our consideration is that these objectives are best reflected through: - Compliance with legislation - Adherence to guidance - Reflection of the regional plan Our consideration is that, throughout, our plan appropriately references legislation, guidance and the regional plan, and as such, we do not agree that we should provide alternative overarching objectives and aims for the WRMP.	We have not made changes to the WRMP in response to this comment. Our consideration is that the objectives of the WRMP are defined by legislation, guidance, and that the plan is reflective of the regional plan, and as such it would not be appropriate for alternative objectives to be set by Thames Water.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 4.3	Thames Water's SEA Environmental Report describes the methodology across multiple chapters/ elements. The assessment methodology for the WRMP options is clear and Table 4.1 sets out the significance of effect for each of the SEA objectives. The characteristics of effects are mentioned, however, the thresholds for identifying these have not been set out. This could mean that significant effects (including transboundary effects) are not being clearly identified. Within the assessment of options in Section 4-4, the qualitative scores switch to numerical values, to facilitate the investment model for the regional plan. Although these are set out in Table 4-4, it would benefit the reader if this was set out within the methodology section. There doesn't appear to be a numerical value for uncertain effects. Uncertainties and limitations have not been specifically acknowledged. Recording and explaining assumptions aid transparency within the Environmental Report on how conclusions have been reached. Uncertain effects have however, been included as an effect within the assessment of options. Thames Water should: • set out the methodology in one section, including the characteristics of effects and the thresholds for these	In response to feedback received, we have reviewed our SEA report for structure and clarity to make the report easier to navigate, including the presentation of the SEA methodology we have followed. We have used qualitative rather than quantitative thresholds as this better suits the strategic nature of the plan. Within the SEA report, we have made these thresholds clearer and added more detail as to describe them. Across the draft and revised draft plans, we have considered and described potential uncertainties rather than scoring these as uncertain effects, owing to their nature. We have made this clearer within the SEA methodology. We have also included a section within the SEA report on overarching limitations and assumptions	We have updated rdWRMP24 Appendix B to make the elements discussed here clearer and to include a section on overarching limitations and assumptions.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	• include a section which sets out overarching limitations and assumptions		
Improvement 5: Justify why the company does not improve its resilience to 1:500 by 2034 when the plan shows that this might be better value			

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 5	Improvement 5: Justify why the company does not improve its resilience to 1:500 by 2034 when the plan shows that this might be better value	For the revised draft plan we have repeated the sensitivity testing around the dates for achieving 1:200 (2033) and 1:500 (2040) drought resilience. The tenor of the Environment Agency's response to our draft plan has been to ask us to do more, more quickly. We consider that our plan is already ambitious in its policy delivery dates and that expectations to bring them further forward (at extra cost) are unrealistic. Subsequently, the Environment Agency wrote to all water companies on the 5 July with concerns about deliverability, financeability and customer affordability of PR24. As such our sensitivity testing has focussed on deferral of policy dates.	We have repeated testing of alternative drought resilience dates as a part of sensitivity testing for the revised draft plan. These have focussed on deferral: 1:200 in 2035 (instead of 2033) 1:500 in 2045 and 2050 (instead of 2040). Results are presented in Section 10 of our rdWRMP24.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 5.1	Table 10-15 shows that in a sensitivity test that looks at achieving 1:500 resilience by 2035, there may be marginal improvements in some of the environmental and social metrics compared to the least cost run. However, the plan commentary does not provide much discussion as to whether this is a feasible scenario, only highlighting potential risk with interaction of Teddington DRA, GUC and West London Abstraction and Storage. We would expect further clarity to be provided on the timing of achieving resilience in the revised plan, particularly if the company includes further demand reductions to meet 110l/h/d. Thames Water should provide further explanation for not planning to meet 1 in 500 resilience earlier in its preferred plan.	See consideration under Improvement 5, above.	Following changes to base data and policy expectations, we have repeated programme appraisal, including sensitivity testing for the revised draft plan. Results are presented in Section 10 of our rdWRMP24.
Improvement 6: Ensure that all supply options provide the necessary Biodiversity Net Gain			
Improvement 6	Improvement 6: Ensure that all supply options provide the necessary biodiversity net gain	See below sub-points	See below sub-points

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 6.1.1	The current options in the Best Value Plan (BVP) do not all achieve at least 10% Biodiversity Net Gain (BNG) (Section 9 – Environmental Appraisal report 200). Thames Water should: • ensure that all its options within BVP comply with relevant guidance and achieve at least 10% BNG • consider more ambitious targets for BNG provision, and a greater degree of ambition and vision for the BNG delivery which could arise, for example from the SESRO	As part of our work to further develop our plan and to support our rdWRMP24, we have developed a BNG strategy for Thames Water which includes information on how we plan to achieve at least 10% BNG across the options in our plan. This is included as an Annex within Appendix AA (BNG and NC report). All projects proceeding to planning will meet the BNG requirements specified for the planning route and type of infrastructure proposed.	Changes made to our WRMP between draft and revised draft in this regard are consistent with our consideration, specifically the BNG strategy has been developed between dWRMP and rdWRMP. See rdWRMP24 Appendix AA
Improvement 6.1.2	While monetised values have been provided for most ecosystem services (Table 3.2, Table 3.6 and Table 3.10), and the percentage change in habitat units has been provided (Table 3.4, Table 3.8 and Table 3.12), it is currently unclear if benefit to the environment and society will be delivered from the options in the BVP and the alternative programmes without mitigation. However, it is noted that Thames Water states that it intends to increase Biodiversity Unity and work towards a 10% BNG for all options with mitigation (Table 6.1). Thames Water should present monetised values with their corresponding financial year, and normalised to the same financial year to ensure fair comparison of the options	The BVP has been optimised via WRSE's investment modelling to provide maximum benefit to the environment whilst achieving an affordable and resilient plan. In consideration of regulator responses, within the rdWRMP24 we have provided further information on the financial year of each monetised ecosystem service value dataset used in the Natural Capital assessment, as well as the final output tables. We have also adjusted these values to report consistently against a single base year. This update is available within rdWRMP24 Appendix AA.	Changes made to our WRMP between draft and revised draft in this regard are consistent with our consideration. See rdWRMP24 Appendix AA

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 6.1.3	The focus of the reported Natural Capital Assessments (NCAs) is on measuring the 'impact' on natural capital options (a negative) and therefore there is a not a clear demonstration of the plan providing quantifiable benefit to the environment and society. Thames Water should clarify whether benefit to the environment and society will be delivered from the options in the BVP or proposed mitigation	We acknowledge that the Natural Capital assessment currently focuses on the impacts of options, and does not explicitly factor in the higher levels of resilience or environmental benefits that the plan would bring. One difficulty in this area is the uncertainty around the environmental benefit that making licence reductions would bring, and quantifying this in the absence of thorough investigation. We would clearly not make licence reductions unless there will be a demonstrable benefit. As such, we have amended the narrative in Section 11 to include discussion of the overall Environmental Net Gain of our plan, making clear that the plan provides an overall benefit to the environment and society.	Further narrative on the overall environmental benefits of the plan has been presented in rdWRMP24 Section 11. This is supported by our BNG strategy which details how the plan will achieve net gain and is included as an annex to rdWRMP24 Appendix AA.
Improvement 6.1.4	Additional detail is required on Natural Hazard Regulation to confidently assert the quantitative assessment met minimum practice.	Within Appendix AA we have provided further detail on our methodology to assess Natural Hazard Regulation within our Natural Capital assessment.	See rdWRMP24 Appendix AA for update to include further detail on assessment of this ecosystem service.
Improvement 6.1.5	It is unclear if and how the NCAs were weighted against other metrics within the investment model. It is not clear how the NCAs influenced the decision-making process. Thames Water should explain the influence of the NCA results on the decision-making process	The programme appraisal process, as described in s10, applies no weighting to individual metrics in identifying the overall Best Value Plan, instead seeking aggregated improvement across all of them. NCA results are included in and influence the aggregate. If a particular metric within the	See rdWRMP24 Section 9.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
		aggregate is seen to be driving improved or poor performance these are explained.	
Improvement 6.1.7	Sensitivity analysis was not undertaken in NCA which could have highlighted how large an influence the Climate Regulation service has on the results. Thames Water should undertake this sensitivity analysis	Within the NC assessments, each ecosystem service was weighted equally when calculating the overall NC result. Our consideration is that conducting sensitivity analysis within the Natural Capital Assessment is a level of complexity beyond what is required to robustly produce this strategic plan. The environmental metrics were weighted equally to each other as part of the environmental assessment and BVP modelling process. Sensitivity analysis is therefore likely to be of limited value.	We have not made changes for the reasons highlighted in our consideration of this response.
Improvement 6.1.8	Currently a mixture of the BNG 2.0 Metric and BNG 3.0 Metric has been used. Thames Water should ensure all BNG assessments are updated so the same version of the BNG metric is used for consistency (Defra BNG 3.1 Metric)	Within our rdWRMP24, all BNG assessments have been updated to Defra BNG metric version 3.0 as agreed with Natural England.	Updates as indicated in our consideration. See rdWRMP24 Appendix AA

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 6.2.1	Reporting of the Natural Capital Assessment methodology could benefit from additional detail. In addition, reporting of intermediate results (e.g., quantification of carbon sequestration for each broad habitat type within each option) is missing, making it difficult to determine if the stated methodology (Section 2.4) was followed. • demonstrate that stated methodology is followed by updating the report with intermediate results • update report with intermediate quantification results such as tCO2e sequestered for each habitat type in each option and improve qualitative commentary	As a result of this comment, we have added intermediate results for carbon sequestration for each type of habitat impacted by each option assessed within Appendix AA.	Updates as indicated in our consideration. See rdWRMP24 Appendix AA
Improvement 6.2.2	Within the Natural Capital Assessment, there is no mention of adjusting prices to a single financial year, and there is no mention of the year that prices in the final output tables were reported as. Thames Water should clarify the financial year that the final output tables were reporting	As a response to this comment, within the rdWRMP24 we have provided further information on the financial year of each monetised ecosystem service value dataset used in the Natural Capital assessment, as well as the final output tables. We have also adjusted these values to report consistently against a single base year.	Updates as indicated in our consideration. See rdWRMP24 Appendix AA
Improvement 6.2.3	It is unclear if the central, low or high BEIS NonTraded Carbon Values were used to assess the Carbon Sequestration ecosystem service. Thames Water should clearly state which BEIS Non-Traded Carbon Values were used to assess the Carbon Sequestration ecosystem service. Thames Water should clearly state which BEIS Non-Traded Carbon Values were	As a result of this comment, we have reviewed Appendix AA to make it clearer as to which BEIS Non-Traded Carbon Values were used to assess the Carbon Sequestration ecosystem service.	Updates as indicated in our consideration. See rdWRMP24 Appendix AA

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	used to assess the Carbon Sequestration ecosystem service		
Improvement 6.3	A direct reference to Environmental Net Gain (ENG) was stated in the report, whereby Thames Water's WRMP will aim to demonstrate if ENG has been achieved through BNG and wider environmental gains quantified in the NCA (Section 1). In addition, the company suggests mitigation and enhancement opportunities in Section 4.2 and Table 4.4 to improve BNG and introduce ENG. However, these benefits will be provided by mitigation measures and enhancement opportunities that are currently not quantified and thus, it is difficult to determine if ENG will be achieved. Thames Water should quantify benefits from mitigation measures and enhancement opportunities to demonstrate how ENG will be achieved.	As part of developing our plan from draft to revised draft and to support our rdWRMP24, we have developed a BNG strategy for Thames Water which includes information on how we plan to achieve at least 10% BNG across the options in our plan. This is primarily mitigation focussed, but has aimed to maximise gain by considering our company's BNG opportunities holistically. Exploring environmental enhancement opportunities unrelated to mitigation or Environmental Destination/WINEP will be something we will explore as part of our next planning cycle, as the work in this area matures.	See Annex A within rdWRMP24 Appendix AA for our BNG strategy which represents a further level of development and detail in terms of our plans to effectively achieve synergistic biodiversity net gain across our plan.
Improvement 7: Explain the dip in new properties between 2046 and 2052 and assess whether this is appropriate			
Improvement 7	Improvement 7: Explain the dip in new properties between 2046 and 2052 and assess whether this is appropriate	See improvement sub-points	See improvement sub-points

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 7.1	There appears to be an unusual dip in the new properties forecast figure between years 2046 to 2052 within the WRMP planning tables. It seems that there is an error in the occupancy rate for TWSGLF. It is not clear if this impacts on the WRZ's supply demand balance. Thames Water should explain the dip in new properties forecast figure between 2046 and 2052 and state whether this has a material impact on the plan. If this forecast contains an error, the company should resolve within its WRMP planning data tables and ensure the plan narrative reflects this revision.	The dip in new properties happens in a sinlge year (2050/51) and is due to a change from using sub-national population projections and switching to National Population Projections (SNPP stop in 2050). The dip is evident across all WRZs and is to be expected.	We have revised our population and property forecasts between dWRMP and rdWRMP. This dip in forecast growth in new properties exists in our rdWRMP.
Improvement 8: Provide further environmental benefit through nature-based solutions, using pilot studies where appropriate			
Improvement 8	Improvement 8: Provide further environmental benefit through nature-based solutions, using pilot studies where appropriate	See below sub-points	See below sub-points

Improvement 8.1	Thames Water's dWRMP does not meet our expectations for inclusion of catchment or nature-based solutions. We recognise that advice provided by regulators in 2022 suggested that these schemes could only be included if they provided a benefit to any element of the supply-demand balance. However, these options could be considered as part of a best value plan, as they may provide mitigation for abstraction reductions that cannot be made immediately, or additional benefits for the catchment. The recently updated WRPG explains our position further. We would encourage Thames Water to reconsider catchment options in line with the latest Water Resources Planning Guideline to explore whether catchment or nature-based solutions could form part of the best value plan. Delivering environmental destination through abstraction reductions alone is unlikely to be the best value solution. These schemes benefit environmental destination in different ways for example: • to make the environment more resilient to low flows • to benefit supply (e.g., through improved aquifer recharge) • to mitigate the impact of abstraction on the environment whilst waiting for a full solution to come online Thames Water should consider and include complementary catchment and	We are committed to exploring and quantifying the benefits of nature based solutions for water resources planning. As part of WRSE we have developed an ambitious Water Industry National Environment Programme (WINEP) investigation for the region that will focus on better quantifying needs and wider benefits and supporting the piloting of test case options. Working regionally offers us the opportunity to make the pilots more efficient in yielding maximum breadth of insight on the benefits of different option types, as well as allowing us to understand where in the region would benefit most from these options from a flow resilence perspective. In AMP8 we will consider nature-based solutions in more detail as a company as part of our WINEP programme, with a particular focus on establishing where nature-based solutions may mitigate the environmental need for abstraction licence reductions. In addition, it is important to note that the Water Resources Management Plan is not the only area of Thames Water which is considering the adoption of nature-based solutions, with multiple workstreams across the company considering and funding them to solve different problems. Different workstreams considering nature-based solutions have different drivers, and we map catchment vulnerabilities to understand where interventions will have the biggest impact. Drivers include water quality, improving urban drainage, river restoration and community engagement and education. Many of these programmes have recently been	Catchment options and nature-based solutions do not feature as a prominent part of our rdWRMP, which is not a change from our dWRMP. This should not, however, be seen as an indication that we will not look to develop catchment options or nature-based solutions in the future, and is more a reflection of the current evidence base from which we could define whether catchment and nature-based solutions will be able to provide new supplies or mitigate the need for abstraction reductions alongside wider benefits to the environment and society. As described in our consideration, work to build this evidence base will be carried out in AMP 8.

	nature-based solutions in the plan to deliver environmental resilience as well as contribute to natural capital and biodiversity net gain. Where there is believed to be insufficient evidence of the benefits of certain types of nature-based solutions, we expect to see pilot schemes implemented to test and understand the potential benefits.	expanded to cover more of our supply area, built on a solid foundation of working over a number of years with community stakeholders. We know that we have further work to do to integrate our view of drivers for and benefits of NBS, and this is something that we will continue to do in future planning cycles.	

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 8.2	There are schemes listed and referenced in Section 7.6.2 which could be used but it is not clear to what extent otherwise sustainable groundwater resources are 'sterilised' because of high nitrate levels and the extent to which addressing this could free up otherwise environmentally benign groundwater sources. It is not clear how widely this specific catchment measure was thoroughly assessed and whether the potential deployable output from such an approach has been thoroughly explored. Thames Water should: • clarify the extent to which groundwater sources have been made unusable by high nitrates • how these sources have been assessed and whether all catchment management options which could secure additional groundwater resources (should nitrate levels be reduced) have been screened/considered	We have considered nitrate reduction measures as a catchment option type, and have assessed the potential source Deployable Output increases which could result from nitrate reduction measures. Rather than resulting in the 'sterilisation' of groundwater sources, high nitrate levels have occasionally resulted in Thames Water investing in new treatment to ensure that our water supply meets standards regarding nitrates. As such, the primary Deployable Output benefit from catchment nitrate reduction measures would be in reducing the process losses which result from nitrate treatment. These process losses are not large, and so would not result in a material change to our plan, though we will continue to investigate catchment options. We have reviewed the list of disused sources to establish whether any of these sources could be returned if nitrate levels were to be reduced, and if their return would be environmentally desirable. We have not identified any sources which are disused due to nitrate levels.	We have not made changes to our WRMP following this consultation response point, as nitrate issues and options to mitigate nitrate issues are adequately considered within our dWRMP.
Improvement 9: Review resilience in the context of the 2022 drought			

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 9	Improvement 9: Review resilience in the context of the 2022 drought	As required in the updated WRPG, we have included an appendix to the WRMP covering our lessons learned through drought of 2022. Some areas of improvement and strengths have already been highlighted by our internal lessons learnt report, and actions are underway. The WRMP Appendix captures some of these learnings, in particular planned solutions to improve resilience. It will also discuss our experience last year as compared with our supply and demand forecast and any new findings that need to be investigated further.	Our new 2022 Drought Appendix (Appendix CC) covers a range of learning points as per Water Resources Planning Guideline

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Improvement 9.1	The drought of 2022 posed supply challenges for most water companies in England and was one of the most significant droughts of recent times. The drought saw very high demands and highlighted some areas where resilience needs to be improved. Thames Water should consider what lessons it can learn from the drought and how it can improve security of supply and supply resilience for its customers while protecting the environment. The company should present the lessons identified and the actions relevant to its WRMP in its final plan. It should highlight any changes it is planning to make to its plan as a result of the drought. The company should clearly show in an appendix to its final plan how it has learned from the conditions experienced in 2022. This includes: • how the company can improve resilience • temporary new schemes that could be permanent • assumed benefits reflect latest understanding • updating deployable output where understanding improved around source responses to drought • demand forecast assumptions including extent/duration of peak demands • schemes to improve connectivity and WRZ integrity	Please see our response to the broader consultation improvement point 9.	Our new 2022 Drought Appendix (Appendix CC) covers a range of learning points as per Water Resources Planning Guideline

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	• investment to remove infrastructural/operational constraints • appropriateness of outage forecast		

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issues Raised			
Minor Issue 1 - Groundwater Options	Addington groundwater option will be subject to monitoring requirements at the pre-pp stage and will require assessment for potential water quality concerns.	Monitoring will be undertaken during option development.	No change required – none requested
Minor Issue 1 - Groundwater Options	Merton Aquifer Recharge and Merton recommissioning options are both within confined aquifer so low risk to surface water features, they will be subject to monitoring requirements at pre-application stage as normal.	Monitoring will be undertaken during option development.	No change required – none requested
Minor Issue - 10 General	It is noted that the development of the Oxford Cambridge (OxCam) growth corridor will require development of assets to enable use of water from SESRO from 2040 (Section 11.141). Will the water supplying the growth arc remain available for abstraction at west London sources? i.e. how will this water be used both spatially and temporally? Are there any adverse impacts on use of SESRO for	We have not included information on utilisation of options across all adaptive pathways due to the volume of information that would be required to do so. In the different adaptive pathways there are differences in the utilisation of options in different branches and so increased use in Oxfordshire could change the selection of options for the London WRZ. The knock-on impacts can, however, be more complicated, as increased use in Oxfordshire could alternatively be offset by a	We have not made changes to the plan, as including a wide range of information about utilisation in different adaptive pathways would result in an unmanageably long WRMP.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	supporting London supply as per the primary requirement for SESRO? Does this uncertainty build on the additional resilience of a 150 Mm3 design?	reduced T2ST or T2AT, with alternative options developed instead.	
Minor Issue 11 General	Removal of constraints at Britwell source (Table 11-11). This source is currently part of an investigation into a group of licences impacting Chiltern Chalk Springs. The Phase 2 investigation that will consider uplift of licences to Fully Licensed, including the removal of constraints at Britwell is not yet concluded. This licence has been unused since ~2006.	This option has been rejected between dWRMP and rdWRMP as a response to this comment.	This option has been rejected between dWRMP and rdWRMP
Minor Issue 12 - Appendix D	Development of Datchet GW source is not considered a significant risk, but the impacts will need to be assessed at time of application (Table 11-14). It is likely the impacts of the source will primarily affect AP5, Windsor GS, for which the compliance is not expected to deteriorate as a result, however there is a risk of deterioration at fully licensed flow scenario. The impacts on the Ground Water Body (Maidenhead Chalk) will need consideration as this currently has an over-ridden water balance status based on absence of evidence of a failure. It is unlikely this assessment would be impacted by this source development.	Thank you for your response; we will consider this in relation to further development of this option.	No changes made to the plan as a result of this response as this is noted as not a significant risk.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issue 12 - Appendix D	Note in Appendix D summary of WFD assessment, the Lower Thames Gravels GWB has been assessed interchangeably with the Chiltern Chalk Scarp. Our understanding is this option is sourced from the underlying chalk – so probably Maidenhead Chalk and needs clarification.	Thank you for your response. It is accurate that the assessment needed to be corrected to name the Maidenhead Chalk waterbody, this has now been updated within the WFD report (Appendix D) in our revised draft plan.	See rdWRMP24 Appendix D for correction to WFD waterbody.
Minor Issue 12 - Appendix D	Beckton, Crossness & Deephams indirect reuse options do not appear to be featured within the WFD Assessment Appendix D_October22_REV_D document. Given the quality and morphological impacts, and potential cumulative effects of these three schemes, this should be considered from a WFD and flood risk perspective.	Thank you for your response. Crossness Reuse was screened out at further screening for the draft plan, on the basis that there are more water reuse options than could reasonably be required and it is the least favourable reuse option measured against the cost dimension on the Feasible List. The WFD report for the draft plan reported on options selected in situation 4 of the Best Value Plan, Least Cost Plan and Best Environmental and Societal Plan only, with a focus on options selected before 2050. Beckton Reuse was not selected in these plans, and so was not reported on. Deephams Reuse was omitted in error due to the focus on options selected prior to 2050; the WFD report for the revised draft plan has been updated with all options selected across the full plan period as a matter of course.	Changes made to the plan are as per our response.
Minor Issue 13 - Appendix C – HRA	Generally clearly written and well-structured. Good level of detail regarding the assessment against each of the options. Clarity needed around how the SWOX to SWA (Abingdon WTW to Long Crendon) could impact on Cothill Fen SAC (e.g. statement on page 4).	Thank you for your response. Following feedback from a number of consultees we have updated our environmental reports to provide further detail on anticipated impacts from our plan options and mitigation measures to avoid or minimise these impacts.	Please see environmental reports for rdWRMP24 (Appendices B, C, D, AA and BB).

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issue 14 - Section 11.208	Ensure alignment with South East Water import and Guilford zone.	We have worked hard as part of the WRSE Regional Group to ensure alignment. Our representation of the SEW to Guildford transfer is consistent with South East Water	No change - this transfer was represented consistently in dWRMP and remains so
Minor Issue 15 - Missing reference	The company has demonstrated that it has fully considered the impacts of climate change, however there is no reference to the HR Wallingford report.	We assume that this references the CCRA3 report.	This report has now been referenced, see Appendix U
Minor Issue 16 - Missing Appendix	Appendix V was not provided, is this an omission?	This is not an omission. In WRMP19 we included an Appendix V - Risk and Uncertainty, in which a greater level of detail was presented regarding the Target Headroom assessment. Whille in the document production phase of WRMP24 we determined that we could include sufficient detail in Section 6 to render Appendix V unnecessary.	No change - this is not an omission
Minor Issue 17 - Illegible Table	Customer preference weighting Table 10.17 is not legible.	This figure no longer features in our rdWRMP24.	This figure no longer features in our rdWRMP24.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issue 18 - Biodiversity Net Gains	"SEA Report: The Environment Agency would expect BNG and mitigation measures to include reference to or consideration of: • Local nature recovery networks and biodiversity opportunity areas (BOAs) – data held by Local Authorities • Local strategy e.g. The PUSH Green Infrastructure Strategy – data held by Local Authorities • Local Wildlife Sites and recommendations for restoration/enhancement – data held by Local Authorities • Designated sites (e.g., SSSI, SPA) NE European Site Conservation Objectives: Supplementary advice on conserving and restoring site features • Chalk streams are mentioned as a priority habitat but then nothing more is said – the plan really needs to more overtly address impacts and opportunities to benefit chalk streams. We would also expect BNG and mitigation to be more ambitious in scope and scale. Land purchase allows more radical change in land use and management than can normally be achieved through incentives and small grants. We are pleased to see mention, albeit very brief, to beavers and purchasing SPZ Zone 1 land (Table 5.4) in the Achieving a protected and enhanced environment	Thank you for your response. Within our BNG strategy for our revised draft plan we have actively considered local nature recovery networks and biodiversity opportunity areas. Information held at a more local level (local strategies and local wildlife site information) will be considered in further detail as options are progressed through subsequent development stages. The needs of designated sites and supplementary advice associated with these have been considered as appropriate within our rdWRMP24 SEA and, WFD and HRA reports (Appendices B, C and D). We consider that within both our draft and revised draft plans that we have actively targeted environmental improvements towards improving the condition and function of chalk streams. This has been described in Sections 1 and 5 of our draft and revised draft plans. We cannot respond to the remainder of this response, as it appears to have been directed to South East Water.	No changes have been made to the plan as a result of this response for the reasons set out in our consideration.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
	technical report. We would encourage SEW to consider actions further than this, considering scale (chalk aquifer scale rather than surface water catchment scale), e.g., promote the designation of Water Protection Zones and fund min-zero-tillage, arable reversion, and rewilding in SPZ 2 and 3 land, to enhance multiple ecosystem services for people and wildlife, and increase natural capital.		
Minor Issue 2 - Flood risk	We would like to see maximum implementation of sustainable drainage schemes (SuDS) as these not only promote groundwater recharge, but also alleviate flood risk by reducing runoff in heavy rainfall events. Any new or expanded infrastructure proposed in areas at risk of flooding should be able to demonstrate that it cannot be located in an area of lower risk and that suitable mitigation will be incorporated.	We support we use of SUDS and our DWMP includes a significant programme for flow attentuation. There can also be water resources benefits (such as GW recharge) but currently this is difficult to quantify. As such, SUDS does not appear as an option for DO increase in the WRMP, but could feature in nature based solutions and catchment management solutions for wider environmental benefit - highlighted in the WRMP, but not funded through it.	No change – we do not have sufficient confidence in the use of SUDS as water supply options to include them in our WRMP.
Minor Issue 2 -Flood risk	The cumulative impact of abstraction reductions on water levels in flood events needs to be addressed. It has been assumed that an assessment will be undertaken in areas where abstraction reduction is going ahead or has been proposed. Levels or an increase in flows may need to be modelled to understand if there is any additional risk of flooding.	Our consideration is that the impact of abstraction reductions on water levels in flood conditions is something which should be undertaken as part of more detailed investigations in AMP8 and beyond. The profiles of licence reduction included in our WRMP are, as per other responses on this topic, in line with the scenarios set out in the National Framework for Water Resources and guidance.	No change has been made to our plan as a result of this response for the reasons set out in our consideration.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issue 2 - Flood risk	It was good to see 'Appendix Y–DWMP and WRMP Alignment', and it does feel like the company has alluded to wanting greater environmental benefits when considering Natural Capital and Biodiversity Net Gain, however the ambition should be to strive for Natural Flood Management (NFM) where possible. (Appendix X Investment Model Output / Appendix Y–DWMP and WRMP Alignment)	Thank you for your appreciation of our DWMP/WRMP Appendix. We support the principles of Natural Flood Management where possible and strongly consider nature based solutions in the optioneering for both the WRMP and DWMP. This point should be raised in the DWMP consultation rather than the WRMP consultation	No change – relevant for DWMP
Minor Issue 2 - Flood risk	As drought and flood planning are two sides of the same coin, the water company alongside help from the EA could consider this together.	We agree with this sentiment	No change - none requested
Minor Issue 3 - Section 4 Table 4.4	Within the cumulative effects which are unlikely to lead to an increased risk of WFD deterioration (Table 4.4) reference to Pymmes Brook (upper channel with Muswell St & Bounds Grn Brk) is incorrect. This refers to the cycle 1 name for this water body. This has been updated to Pymmes Brook upstream Salmon Brook confluence in cycle 2. The water body ID remains the same.	Thank you for your response. The name for this waterbody has been updated within the WFD report (Appendix D) in our revised draft plan.	See rdWRMP24 Appendix D for updates to WFD waterbody name.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issue 4 - Enfield license reductions	NLARS licenses (Enfield and New Gauge) are all lumped into the Lower Thames Deployable Output. This makes it difficult to understand the implications of reductions in these sources. It would be preferable to have these broken down separately and for the Enfield group, by point.	We are unable to accommodate this request as NLARS is a triggered scheme and, alongside Enfield and New Gauge, is part of a complex conjunctive use system. Our consideration is that licences are shown adequately.	No change - dWRMP contains adequate detail
Minor Issue 5 - General	Risk of deterioration is required under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 not the Water Framework Directive directly (Section 5 ss5.10. P6).	We appreciate that we may have referred to this legislation incorrectly, however our consideration is that this is a technicality which does not materially impact our plan	No change - does not materially alter our plan
Minor Issue 6 - General	Company Environmental Destination needs to go beyond chalk rivers. While they are a priority, the destination should be to contribute to returning all waterbodies to GES/GEP, in line with their duty as a public body. (Section 2. ss35 p16)	We agree with this sentiment and have not prioritised chalk streams to the detriment of other catchment types. Section 5 of the WRMP describes our prioritisation approach	No change - chalk streams have not been prioritised to the detriment of other catchment types
Minor Issue 7 - General	The text states that “The status of groundwater bodies is good for 64% of groundwater bodies beneath Thames Water’s landholdings.” It is unclear if this only applies to company’s landholdings or the supply area. (Section 2. ss23. P8)	Thank you for your response. As described, this precise statistic applies to Thames Water’s landholdings.	No change has been made to our plan as a result of this response – clarification provided.

Point Reference	EA Consultation Response	Our consideration	Changes to the draft WRMP24, or if no changes are made, why not
Minor Issue 8 - Thames valley Aquifer Recharge Scheme	"Thames Valley Aquifer Recharge Scheme (Appendix R, page 74). This is Lower Green Sand (LGS) recharge scheme based adjacent Ashford STW (Catchment 31). Recognised proposal subject to EA consent & licensing procedures but aquifer properties not well known.	This comment does not indicate action is required and appears to be general appraisal	No change – none requested
Minor Issue 9 - General	Thames Water previously mentioned a borehole location around the Hoover Building (Northwest London) without confirmation of the location. This may be different from the confined London chalk. The abstraction proposal request will need to be consistent with our stated licensing strategy for the London confined Chalk. There is risk associated with unknown location & unable to confirm viability of the present proposal.	The proposed new abstraction borehole in the London Confined Chalk option is in Perivale, 0.5 - 1 km NW of the Hoover Building. It is likely that this is the same location discussed in previous meetings. More detail is included in the Conceptual Design Report for the option, which is available on request. The licensing strategy in the latest Environment Agency report, Management of the London Basin Chalk Aquifer - Status Report 2022, indicates Water Available within the option area at present. This would be reviewed during option development, to ensure it remains consistent with the licensing strategy in place at the time.	No change. Details are available in the Conceptual Design Report for the London Confined Chalk (north) option, which is available on request.

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