Draft Water Resources Management Plan 2024 Statement of Response

Main report

August 2023

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Glossary

Term	Description
Abstraction	The removal of water from the ground or rivers. Abstractions are licensed by the Environment Agency.
Base year	The year from which we begin our forecasts.
Business Plan	Business Plans are produced by water companies every 5 years. They set out their investment programme to ensure delivery of water and wastewater services to customers. These plans are drawn up through consultation with the regulators, stakeholders and customers and submitted to Ofwat for detailed scrutiny and review.
Customer Challenge Group (CCG)	An independent body that challenges both our current performance and our engagement with customers on building our future plans.
Department for Environment, Food and Rural Affairs (Defra)	UK government department responsible for safeguarding the natural environment, food and farming industry, and the rural economy.
Demand management or reduction	The implementation of policies or measures which aim to influence the consumption of water i.e. to make the most efficient use of water.
Deployable Output (DO)	A measure of the available water resource during a drought year for a given level of service.
Economics of Balancing Supply and Demand (EBSD)	A method to assess the balance between a company's available water resource and the demand for water by customers. Any imbalance between supply and demand can be met through demand management strategies, such as selective metering and leakage control, and/or additional water resources.
Environment Agency (EA)	UK government agency whose principal aim is to protect and enhance the environment in England and Wales.
Group Against Reservoir Development (GARD)	A community organisation set up to oppose the development of a new reservoir near Abingdon in Oxfordshire.
Habitats Regulations Assessment (HRA)	Regulations to protect Natura 2000 sites (Special Areas of Conservation and Special Protection Areas) and Ramsar sites (wetland sites of international importance).
Historic England	A non-departmental public body of the government whose aim is to protect the historical environment of England by preserving and listing historic buildings, ancient monuments.
Innovative groundwater options	Innovative groundwater options include artificial recharge and aquifer storage and recovery schemes. These involve pumping water resources underground for use in dry periods. The approach is not widely used in the UK.
Leakage	Loss of water from water mains (including trunk mains, distribution mains and communication pipes), and customers' pipes.

Term	Description
Leakage reduction	Measures to control the loss of treated water through leaks in the distribution pipework, either by active leakage control or by replacing whole sections of pipe referred to as mains replacement.
Litres per head per day (l/h/d)	This is a unit of measurement of the amount of water each person uses each day.
Natural England	A non-departmental public to protect the natural environment in England, helping to protect England's nature and landscapes.
Net gain	The overall improvement which is observed in a form of measurement, after all positive and negative influences have been fully accounted for.
Non-governmental organisation (NGO)	An organisation that operates independently of any government, typically one whose purpose is to address a social or political issue.
Ofwat	The regulatory body responsible for economic regulation of the privatised water and wastewater industry in England and Wales.
Per Capita Consumption (PCC)	The amount of water used per person per day. It is usually presented as litres/head/day (l/h/d).
Price Review	The process by which Ofwat set the price, investment and service package that customers receive.
Water reuse or water recycling	The use of treated wastewater as a water resource of water for drinking water supply, subject to the necessary treatment requirements.
Severn Thames Transfer (STT)	The transfer of water from the River Severn catchment to the River Thames catchment from the river itself and supplemented by additional sources of water.
South East Strategic Reservoir Option (SESRO)	A new raw water storage reservoir in Oxfordshire.
Statement of Response (SoR)	A document produced in response to the statutory public consultation on the draft WRMP. The document outlines the comments received to the public consultation and revisions to the draft WRMP as a result of these representations.
Strategic Environmental Assessment (SEA)	A systematic decision support process to ensure that environmental and other sustainability aspects are considered effectively in policy, plan and programme making.
Teddington Direct River Abstraction (DRA)	A new river abstraction in west London close to Teddington Weir supported by water recycling.
Water transfer	The movement of water from one place to another through a variety of methods. These may include water pipes and canals.
Water Available for Use (WAFU)	Deployable output – less any sustainability reductions – plus any bulk supply imports – less any bulk supply exports – less any reductions made for outage allowance.

Term	Description
Water Framework Directive (WFD)	EU legislation that requires all member states (including the UK) to take steps to protect and improve the quality and quantity of water within water bodies such as lakes and rivers.
Water Industry National Environmental Programme (WINEP)	Environmental improvement schemes that ensure that water companies meet European and national targets related to water. The WINEP is developed and enforced by the EA.
Water Resources Management Plan (WRMP)	A statutory plan which sets out how a water company intends to provide a secure and sustainable supply of water to customers over at least a 25 year period.
Water Resources South East (WRSE) Group	The South East water companies working together to determine programmes of water resource options and water sharing opportunities in the South East of England to ensure a secure and sustainable water supply for future generations.

Section 1

Introduction

1.1 Water is essential for all our lives. It is essential for everything we do at home and at work. We rely on water to run our schools, hospitals and businesses. It is also essential for a healthy environment. We provide a reliable supply of safe drinking water to around 10 million household customers and 216,000 businesses in London and across the Thames Valley.

1.2 Many people think that there is plenty of water in the UK, but the South East of England is one of its driest regions and is classified by the Environment Agency (EA) as "seriously water stressed"[1]. Our changing climate, the need to protect the environment, alongside accommodating future growth are all putting pressure on our water resources. Without action, we forecast a substantial shortfall of around one billion litres of water a day in the next 50 years. The consequences of not having a secure water supply for our economy, society and the environment is huge.

1.3 There are no quick fix solutions. We need to plan ahead to make sure we use our available water resources wisely, modernise our infrastructure and invest in new sources of water to safeguard supplies and reduce the risk of us running dry during prolonged periods of drought.

1.4 Our Water Resources Management Plan (WRMP) sets out the challenge we face for water supply and the solutions to ensure we have a secure and sustainable water supply for the next 50 years, while protecting the environment.

Water resources planning

1.5 Water companies have a statutory duty[2] to prepare and maintain a WRMP. The purpose of the WRMP is to ensure that there is sufficient water available to meet anticipated demands under various weather conditions, but in particular in dry and very dry conditions, whilst protecting and enhancing the environment.

1.6 Water companies are required to prepare a WRMP at least every five years and review the WRMP annually.

1.7 For this round of planning we have taken a collaborative approach, working with the five other water companies and other water using sectors in the South East through Water Resources South East (WRSE), to develop a draft plan for the whole of the South East region. Figure 1-1 shows the South East region and the six water company supply areas. The draft South East regional plan has informed our own statutory draft WRMP24, and those of the other South East water companies. This approach has enabled the water companies to look beyond their own individual boundaries and identify ways to deliver the most benefit across the South East for the long-term. This collaborative approach is in line with regulatory

1 Water stressed areas – final classification 2021, Environment Agency, July 2021
2 Water Industry Act 1991- Section 37A to 37D

guidance - the National Framework for Water Resources[3] and the Water Resources Planning Guideline[4]. To read more about WRSE and the South East plan go to www.wrse.co.uk.

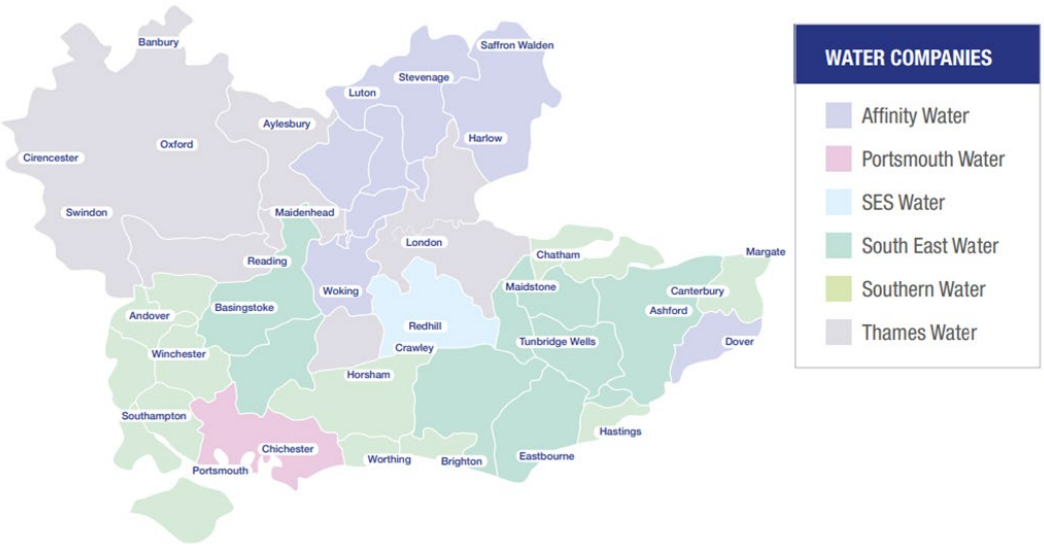


Figure 1-1: Water Resources South East and the six South East water company areas

1.8 Alongside the South East regional plan, regional plans have also been prepared for the other four regions in England to meet the country's future water needs. The regions have worked collaboratively to ensure the regional plans fit together to provide a joined-up national solution. The five regions are shown in Figure 1-2.

[3] National Framework for water resources, Environment Agency, 2020.
[4] Water Resources Planning Guideline, Updated March 2023, published by EA, Ofwat and NRW

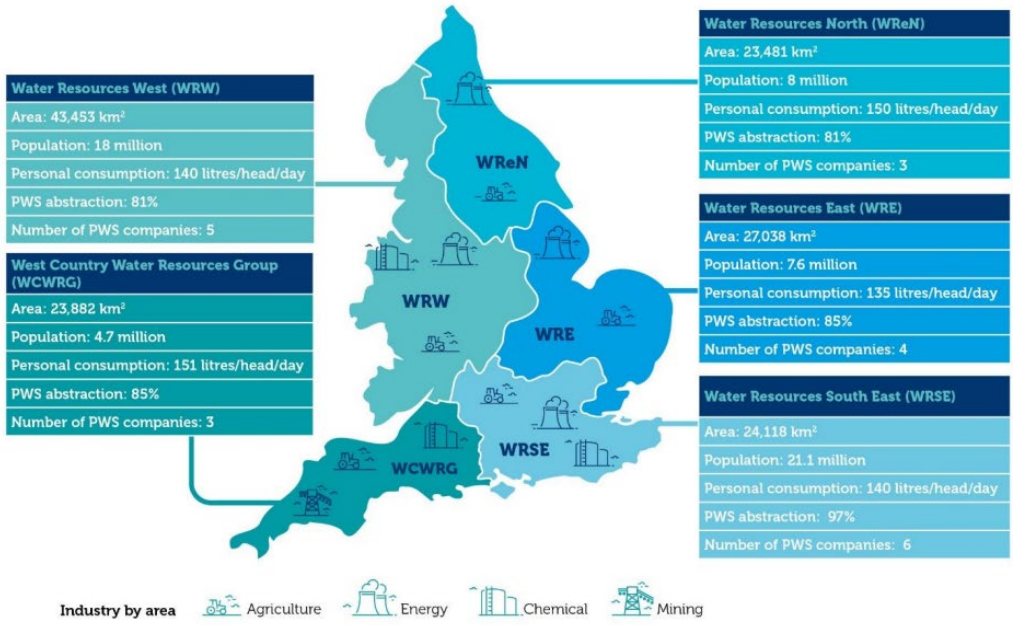


Figure 1-2: Overview of the five regions with key statistics and industries[5]

1.9 Our WRMP24 reflects the South East regional plan and provides a lens for Thames Water's supply area only. We prepared our WRMP24 to comply with the legal requirements and policy expectations set by the government and our regulators, and building on our previous plan, WRMP19[6]. Our WRMP24 is designed to provide best value to society and the environment and includes:

- Forecasts for the likely demand for water taking account of population growth, climate change, and changes in water use
- Forecasts for the amount of water available for public water supply including the impacts of climate change
- Forecasts for environmental ambition including the location and timing for reduced abstraction from rivers and groundwater to help improve the environment
- Forecast of the planning challenge, looking ahead for the next 50 years to 2075
- An overview of feasible options to reduce demand for water, called demand reduction options, and options to increase the amount of water available, called new water sources, as well as catchment and nature-based solutions
- An assessment of the environmental impacts and opportunities
- The programme of options under different scenarios set out in an adaptive plan

1.10 In looking ahead to 2075 there are uncertainties. We have developed an adaptive plan, to accommodate the uncertainties in taking a long-term perspective, with a preferred, or reported, programme of investment, including both demand reduction and new water

[5] Taken from Summary of Regional Plans for Water Resources, November 2022 summary-of-regional-plans-for-water-resources-final-21st-nov-2022-published.pdf (wrse.org.uk)
[6] WRMP19 is available on our website www.thameswater.co.uk/wrmp

supply options. Our WRMP24 includes a monitoring plan which we will use to track developments and allow us to adapt and change our approach if this is needed.

1.11 We recognise there is wide interest in water resources, and in developing the draft South East regional plan and our draft WRMP24 we actively engaged with a wide range of stakeholders to enable them to contribute to our approach, technical work and decision-making, and input to the preparation of the draft plans[7].

1.12 We also engaged with customers as we developed the draft plans to ensure we understood their priorities and preferences and to make sure we reflected what they want now, and in the future[8].

Public consultation

1.13 We published our draft WRMP24 for public consultation on 13 December 2022. We promoted the consultation through a variety of channels to raise awareness and encourage stakeholders and customers to provide their feedback. The consultation was open for 14 weeks and closed on 21 March 2023. We received over 1,680 responses to the consultation.

1.14 Alongside the public consultation we sought feedback from our customers, through research with our community panel and research coordinated by WRSE, to ensure we heard the views of a representative sample of our customers.

1.15 Since the publication of our draft WRMP24 for consultation, new and updated regulatory and policy requirements have been published including the updated Water Resources Planning Guideline[9] and the Government's Environmental Improvement Plan[10]. These set the following requirements:

- Per capita consumption (PCC) – all water companies should plan to meet a target of 110 litres of water per person per day (l/h/d) by 2050 with interim targets set between 2025 and 2050.
- Leakage – all water companies should plan to reduce leakage by 50% by 2050 with interim targets to achieve a 20% reduction by 2027 and a 30% reduction by 2032.
- Non-household water use – all water companies should plan to achieve 15% reduction in non-household water use by 2050, with an interim target of 9% reduction by 2038.

1.16 These requirements have been taken into consideration alongside representations from consultees and feedback from customers in the review and update of our draft WRMP24.

Purpose and structure of this report

1.17 The purpose of this report, the Statement of Response, is to set out the representations received to the consultation and explain the consideration we have given to the

[7] To read more about our engagement with stakeholders go to Thames Water rdWRMP Appendix S
[8] To read more about our engagement with customers go to Thames Water rdWRMP Appendix T
[9] Water Resources Planning Guideline, Updated March 2023, published by EA, Ofwat and NRW.
[10] Environmental Improvement Plan 2023, Defra, January 2023.

representations, alongside the feedback from our customers and new information, in revising the draft WRMP24.

1.18 The Statement of Response has been prepared in line with the legal and regulatory requirements and includes:

- A record of the representations received to the public consultation
- An explanation of how we have considered and had regard to the representations received as part of the public consultation
- An overview of feedback received from customers on the main topics through research studies
- A description of other relevant changes that have occurred during the consultation period and how these have affected the draft WRMP24
- An outline of changes made to the draft WRMP24, and the reasons for the changes, or if no changes the reason for this

1.19 We have sent a copy of this report to the Secretary of State for Environment, Food and Rural Affairs, published it on our consultation website www.thames-wrmp.co.uk and advised everyone who participated in the consultation that the report has been published[11].

1.20 The structure of this document is as follows:

- Section 1: Introduction (this section)
- Section 2: Overview of the public consultation
- Section 3: Main topics raised in the public consultation
- Section 4: Updates to our draft WRMP24
- Section 5: Next steps

1.21 Annexes 1 to 4 provide a list of consultees; email correspondence sent to individuals and stakeholders in relation to the consultation; the consultation questions; and the community commitments published in relation to SESRO; respectively.

1.22 Appendices A – F are responses to representations received from regulators and government organisations.

1.23 Appendices G – I are schedules of responses to representations received from organisations, individuals and online responses. The structure of the schedules is as follows:

- Main points raised by the consultee. Where a representation covers more than one technical point, the individual points have been separated to aid clarity
- Our consideration of the points raised
- Explanation of how the draft WRMP24 has changed in response to comments

1.24 Representations submitted in the name of an organisation have been attributed to that organisation. Representations submitted by individuals have been given anonymity with a unique ID number.

1.25 The list of Appendices A to I is as follows:

- Appendix A - Response to the Environment Agency's (EA) representation
- Appendix B - Response to Ofwat's representation

[11] We will advise all respondents to the consultation where a valid email address has been provided.

- Appendix C - Response to Natural England's representation
- Appendix D - Response to Historic England's representation
- Appendix E - Response to Natural Resources Wales' (NRW) representation
- Appendix F - Response to CCW's representation
- Appendix G - Response to representations from organisations
- Appendix H - Response to representations from individuals
- Appendix I - Response to representations received to the online survey

1.26 We have also published an Appendix on the Severn Thames Transfer, this is Appendix J. In Appendix J we have addressed the points that were raised specifically in relation to this scheme.

1.27 We have endeavoured to address all the main points raised by consultees in their representations where they are related to the draft WRMP24.

1.28 We have prepared a revised draft WRMP24, reflecting the changes that are set out in this document, and have published this alongside the Statement of Response on our website www.thames-wrmp.co.uk.

Section 2

Public consultation

Overview

2.1 We undertook the statutory public consultation on our draft WRMP24 from 13 December 2022 to 21 March 2023 to seek feedback from customers, stakeholders and regulators on our proposals.

2.2 WRSE and the other South East water companies consulted on their draft plans over broadly the same time period, with the consultation on the draft South East plan open from 14 November 2022 to 20 February 2023. We explained to stakeholders that there were multiple consultations on the draft regional and draft company WRMPs, the consultations were separate exercises and submissions should be made to each organisation, as relevant, to ensure feedback would be fully considered.

2.3 We published our draft WRMP24 on our dedicated consultation website www.thames-wrmp.co.uk along with details about the public consultation, how to participate and the information events planned during the consultation period.

2.4 Consultees were able to make representations on the draft WRMP24 using an online survey, by email or post.

2.5 We set up a dedicated email address info@thames-water.co.uk to answer any questions or comments in relation to the public consultation and the draft WRMP24.

2.6 We shared the draft consultation questions with Thames Water's Customer Challenge Group to seek feedback and in particular, to make sure the questions were clear and unambiguous, the questions were neutrally worded to allow respondents to provide full answers and in their own words. All questions were optional, meaning that respondents could provide a response to a question on a particular topic without having to provide a view on any others. The consultation questions are provided in Annex 3.

2.7 We worked alongside WRSE to promote and engage stakeholders on the draft regional plan, this included a launch event in the Houses of Parliament, stakeholder briefings and webinars and a Q&A session. In addition to the regional activity, we engaged widely on the consultation on our draft WRMP24 including hosting a series of community information events in our supply area and stakeholder meetings to provide the opportunity for discussion on our draft WRMP24 specifically.

2.8 We received 1,687 representations to the public consultation.

2.9 We worked with an independent consultancy, Mott MacDonald, to log, code and analyse the representations received to the public consultation.

2.10 We also undertook research with our customers to ensure we understood our customers' priorities and preferences on our proposals. We undertook qualitative research with Thames

Water's customer community[12] and quantitative research[13] in conjunction with the other South East water companies for WRSE to seek feedback on the draft regional plan and potential alternative plans for the region.

Documentation

2.11 We produced a suite of documentation to ensure the information was accessible to all interested individuals and organisations. The documentation comprised:

- A summary of the draft WRMP24 – This is an easy-to-read non-technical summary of the draft WRMP24 which set out the planning challenges we face for our future water supply, the approach we followed in developing the draft WRMP24, and an overview of our draft WRMP24. It signposted the technical documents if the reader wanted to read more detail on a topic. It also included seven consultation questions which consultees could respond to in part or in full, or they could provide a freeform response. The questions are shown in Table 2-1. The front cover and an illustration from this document is shown in Figure 2-1.
- The full technical report consisted of 11 sections as well as 25 appendices, data tables and supporting technical reports including Methodology Reports and Option Feasibility Reports

1.	We've chosen to aim for the highest level of environmental improvements. This is supported by our regulators. We'll be tracking the benefits of our work as we carry it out and will adapt our approach as we learn more. Do you have any comments on our approach?
2.	We've set out our plan for reducing demand, with government interventions, to achieve 123 litres of water per person per day on average. This is above the government's national target, but we think it's the right approach. We'll monitor and develop this by building on our learnings and evidence. Do you have any comments on our approach or suggestions for additional measures we could take?
3.	Measures to reduce demand for water make up over 50% of our forecast shortfall by 2050. Some of the activity is untested and not within our direct control. Do you think this is the right approach? Should we plan for additional new sources of water in case these measures don't deliver the water we've forecast?
4.	A new reservoir is an integral part of our best value plan for the South East. Do you have any comments on the size of a new reservoir?
5.	Do you have any comments on the new water source options included in our draft plan?
6.	Do you think our draft plan represents the best value plan for you, your community and the environment?
7.	Do you have any other comments on our draft plan?

Table 2-1: Draft WRMP24 consultation questions

[12] 7120 Water Resource Management Plan – Thames Water, Verve, May 2023
[13] Regional plan preferences prepared for WRSE, Eftec, June 2023

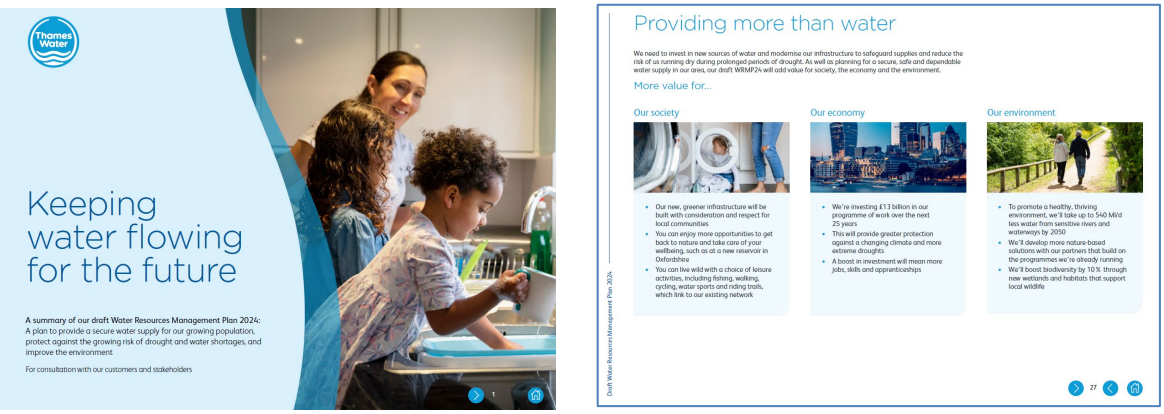


Figure 2-1: Draft WRMP24 - summary document

Source: Draft WRMP24 Non-technical summary front cover and inside page

2.12 We published the documentation on our dedicated consultation website www.thames-wrmp.co.uk and we made paper copies available to view throughout the consultation period, by appointment, at our offices in Reading and at the information events.

Promotion and engagement

2.13 On 13 December 2022 we wrote to over 2,000 stakeholders and interested parties, including all statutory consultees, third party organisations, retailers, developers and stakeholder organisations who had participated in our water resources stakeholder forum and stakeholders who had participated in the public consultation on our previous WRMP (WRMP19) to advise them of the start of the public consultation on the draft WRMP24. We provided a web link and details of how to participate in the public consultation. Annex 1 is a list of all stakeholder organisations to whom the email was sent, and Annex 2 provides the email that was sent at the launch of the consultation. We also sent emails during the consultation (10 March 2023) and just prior to the close of the consultation (20 March 2023) to remind stakeholders of the consultation and encourage their participation.

2.14 We engaged with national and local media throughout the consultation period both proactively to raise awareness of the consultation on the draft WRMP24 and also reactively to respond to media enquiries. Media activity included interviews with BBC South Today, BBC Radio Oxford and articles in The Guardian and technical and member only publications including The Economist and New Civil Engineer. There was also considerable interest and commentary across broadcast; online and print outlets. Examples of media articles are shown in Figure 2-2.

Figure 2-2: Examples of media coverage

Source: Thames Water

2.15 We promoted the draft WRMP24 and the consultation through social media – Facebook and LinkedIn – using both organic posts and paid for advertising. We utilised a range of creative posts and highlighted different aspects of the draft WRMP24 to stimulate interest. In total there were 824,657 impressions with over 16,000 clicks. Figure 2-3 shows examples of the social media posts.

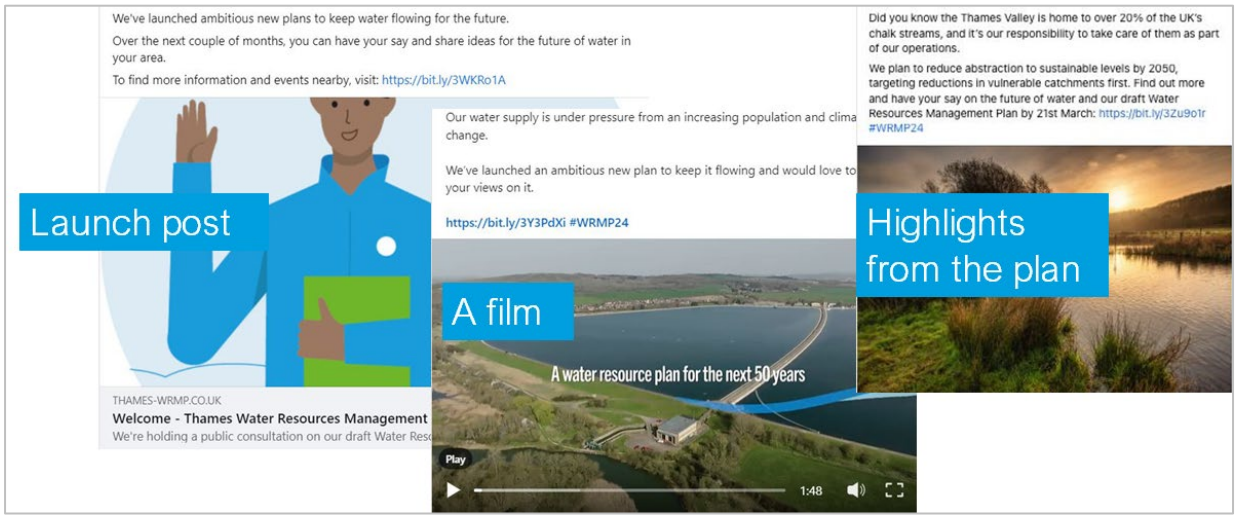


Figure 2-3: Examples of social media posts

Source: Facebook and LinkedIn social media posts

2.16 We held meetings with regulators, stakeholders and local community groups during the consultation period including with Ofwat, the Environment Agency, Natural England, South East Rivers Trust, Maidenhead to Teddington Catchment Partnership and the Water Conservators to explain the draft WRMP24 and provide the opportunity to discuss aspects of the draft WRMP24.

2.17 We briefed several MPs, whose constituencies are in Thames Water's supply area, and elected councillors.

2.18 We offered briefings and meetings to local planning authorities in our area who could be affected by aspects of the draft WRMP24. We met several local planning authorities, both political representatives and officers, including the Greater London Authority, London Borough of Richmond, the Vale of White Horse District Council as well as attending meetings hosted by other organisations including a scrutiny committee meeting hosted by Oxfordshire County Council.

2.19 We held a forum on 31 January 2023 in London to discuss the draft WRMP24, raise awareness of the public consultation and encourage feedback. We invited over 200 stakeholder organisations to join the forum and it was attended by a range of organisations including Department for Environment, Food and Rural Affairs (Defra), Historic England, Greater London Authority, Port of London Authority and Action for the River Kennet.

2.20 We held four community information events during the consultation period located in communities close to the proposed locations of the new water resource schemes included in our draft WRMP24. The locations were Richmond, Abingdon, Cirencester and Steventon. The events were set up with an exhibition of information boards, as well as films, animations, visualisations and key statistics tailored to the interest in the local area. The events were hosted by a multi-disciplinary team, including planning consultants, engineers and water resources specialists, to ensure we were able to engage in detailed conversations and address questions and concerns as fully as possible at the time. Attendees could take away consultation documents and a consultation response form and freepost envelope. Around 700 stakeholders attended these events.

2.21 We also held four "pop-up" exhibitions in some of the main population centres in the Thames Water area at London Paddington station, the Oracle in Reading, Westgate in Oxford and the Brunel centre in Swindon. The main objective of these events was to increase knowledge and understanding of the draft plan. Attendees could take away consultation documents and a consultation response form and freepost envelope. Over 400 people were engaged at these events.

2.22 In response to a high level of interest in the proposed Teddington Direct River Abstraction scheme we hosted an evening online webinar at which attendees could ask questions about the draft WRMP24 and the scheme. We published a detailed question and answer document after the webinar. We also held a further community information event at Twickenham to ensure the local community had sufficient opportunity to talk to us about the draft WRMP24 and the proposed new water resources scheme near Teddington. We hosted MPs and elected council members for a preview ahead of opening the event to the public. Over 440 stakeholders joined these events.

2.23 We promoted the community information events and pop-up exhibitions using organic and paid social media, adverts in local newspapers and via community newsletters.

2.24 An overview of the community events that were open to all interested stakeholders is provided in Table 2-2 with the number of stakeholders who attended each event.

Date (2023)	Event & Location	Attendance
16 January	Community Information Event in Richmond	400
18 January	Pop-up event at Paddington Station, London	115
20 January	Community Information Event in Abingdon	69
27 January	Pop-up event at The Oracle, Reading	94
1 February	Pop-up event at The Westgate, Oxford	95
4 February	Pop-up event at The Brunel, Swindon	113
9 February	Community Information Event in Cirencester	54
18 February	Community Information Event in Steventon	177
27 February	Webinar focused on Teddington DRA proposal	213
3 March	Community Information Event in Twickenham	233

Table 2-2: Community information events, pop up events and the webinar

Source: Thames Water

2.25 We raised awareness amongst our employees. We gave presentations and used internal communications channels to raise awareness of the draft WRMP24 and promote the consultation to Thames Water employees and our partner organisations who in turn were encouraged to cascade the information to families and friends thereby increasing the reach.

2.26 During the consultation period we received enquiries from stakeholders, Environmental Information Requests and queries from regulators. We addressed all these contacts in a thorough and timely manner. The details of these contacts are shown in Table 2-3.

Method	Number
Enquiries raised by stakeholders	50
Environmental Information Requests	6
Queries raised by regulators	25

Table 2-3: Correspondence, queries and information requests.

Source: Thames Water

2.27 In response to representations and commonly raised concerns in relation to South East Strategic Reservoir Option (SESRO) in February 2023 we published a letter setting out our "Community Commitments". This was published ahead of the Community Information Event in Steventon village to reassure the local community that we are listening to concerns raised and as far as possible at this time we set out commitments to ways we would work and aspects of the scheme. These commitments were sent to parish councils, local councillors, local MPs and were available at the information event. The "Community Commitments" are provided in Annex 4 and published on www.thames-wrmp.co.uk.

Feedback channels

2.28 Consultees were able to make representations through a range of channels:

- **Online feedback form** - Respondents could submit an online response via thames-wrmp.co.uk website. This was an open access survey and we set out seven consultation questions (Annex 3). Respondents could answer all of the questions or choose to answer a selection of the questions.
- **Email or post** - Respondents could send feedback via email or post to Defra and Thames Water. These responses were freeform responses in that they did not respond to specific consultation questions. Thames Water collated all the responses received and shared these with Defra, and Defra shared those responses that were only received by them.
- **Paper feedback form** - Respondents could fill in a hard copy feedback form (which had the same questions as the online survey). A pre-paid envelope was provided with the feedback form.

Summary of responses

2.29 In total we received 1,687 representations to the public consultation.

2.30 We appointed an independent consultancy, Mott MacDonald, to systematically log and code the representations. Within each response there could be one point or multiple points. We separated the representations into the main component parts, and these were coded using an agreed coding framework. Mott MacDonald did not code the representations received from regulators and government organisations, or those that were lengthy and extremely detailed. Thames Water managed these responses through a separate process due to the detailed technical nature of the representations.

2.31 The number of representations received via each channel is shown in Table 2-4.

Channel	Number of representations	
	Organisations	Individuals
Online form	67	1098
Email	85	398
Post	0	39
Total:	152*	1535

Table 2-4: Number of representations received via each channel

**This includes consultees who affiliated themselves with an organisation.*
Source: Mott MacDonald

2.32 Organisations who submitted a response to the consultation are shown by type in Table 2-5. To note, the organisation type has been done based on professional judgement.

Stakeholder type	Number of representations
Action/pressure/campaign group	11
Business & Commercial	13
Catchment & River Partnerships	4
Councils (including County, Unitary, Borough and District)	14
Industry trade body / Union / advocacy	2
Infrastructure operator	1
Interest group / society / charity & trust	26
Landowners	3
MPs (their constituency offices and political parties)	10
Neighbourhood / resident group	5
NGOs	4
Parish and Town Councils	14
Recreation & Leisure	10
Statutory authority	3
Regional Water Planning Authority	1
Regulators	6

Table 2-5: Number of representations by organisational type

Source: Mott MacDonald

2.33 The consultation responses were dominated by respondents in three geographical localities which accord with the locations of the proposed strategic water supply schemes namely: West London – Richmond-upon-Thames and Kingston-upon-Thames; Oxfordshire; and Gloucestershire/the Cotswolds as shown in Table 2-6 and Figure 2-4. It was optional as to whether respondents provided postcode information and the information provided reflects those representations where postcode information was provided, which represents 49% of respondents.

Respondents by postcode	Number of responses
Bedfordshire	1
Berkshire	18
Bristol	2
Buckinghamshire	7
Cheshire	2
Cornwall	1
Devon	1
Dorset	1

Respondents by postcode	Number of responses
Dyfed	2
East Sussex	1
Essex	2
Gloucestershire	49
Greater London	751
Greater Manchester	1
Hampshire	6
Hertfordshire	8
Kent	8
Norfolk	1
Nottinghamshire	3
Oxfordshire	319
Powys	1
Somerset	4
Surrey	46
Tyne & Wear	1
Warwickshire	2
West Midlands	3
West Sussex	3
West Yorkshire	1
Wiltshire	21
Worcestershire	1
Null (incomplete/incorrect postcode provided)	14
Total	1,281

Table 2-6: Consultation responses – geographic location by county

*Source: Mott MacDonald – *Analysis based on responses that included postcode data*

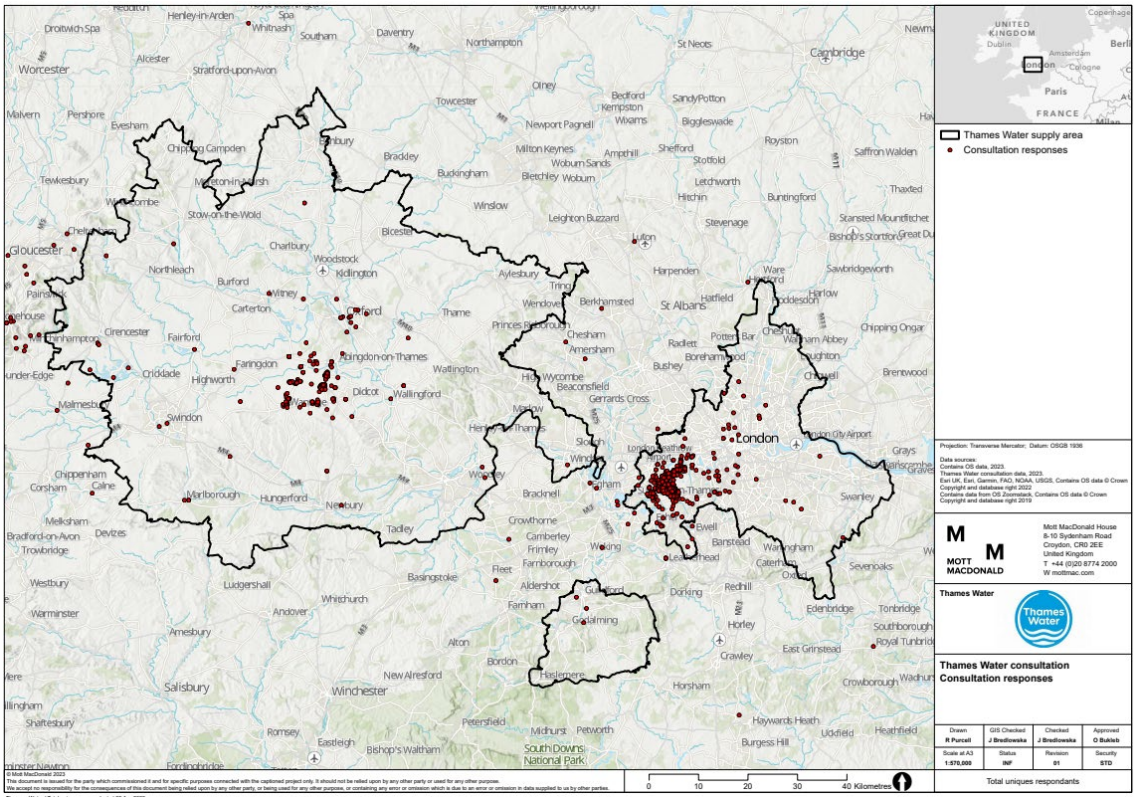


Figure 2-4: Distribution of respondents

*Source: Mott MacDonald – *Analysis based on responses that included postcode data*

2.34 At the close of the consultation, when reviewing the responses received, we identified that some responses submitted via the website appeared to be incomplete, and some had contact details only, with no content recorded. We wrote to each of these consultees and asked if they wanted to review their representation and provide amended and/or additional content to ensure we received their complete representation. The amended or additional representations were included in the log of responses, replacing any previous submissions by that consultee.

Analysis of responses to the consultation

2.35 Respondents to public consultations are self-selecting i.e. any individual or organisation can participate and submit their views. Generally, those who have an interest in an aspect of the draft WRMP24, be it a watercourse or a scheme or because a proposal may affect where they live, are more likely to participate in the public consultation than those who do not. As such, public consultations by their very nature are not necessarily representative of the general population or our customer base. For this reason, the approach to consultation analysis is qualitative rather than quantitative. We are interested in the range of views held and who said what, rather than focusing on the number of responses on a theme or issue.

2.36 Not all stakeholders answered each question, some responses and points were not directly related to the questions, and some responses focused on topics which were outside of the scope of this consultation. We have endeavoured to respond as fully as possible to all the representations received.

2.37 Email and written freeform responses to the consultation were systematically logged and coded using a code frame structured in accordance with the sections of the draft WRMP24 technical report.

2.38 Responses to the online survey and the form were also coded, using a code frame developed for each question. In terms of the survey responses, it should be noted that not all respondents answered every question and not all responses related to the question asked. Some responses related to other consultation questions and some to issues not explicitly raised in the consultation.

2.39 The coding was completed by Mott MacDonald, with the exception of representations submitted by regulators or representations that were very technical in content.

Feedback from our customers

2.40 As noted above, public consultations are generally completed by those who are engaged with the issues, and as such, they are not always representative of the general population or our customers. Ensuring we understand and respond to the preferences of our customers is a key requirement of our regulators[14] and so to ensure the views of our customers were actively sought, and representative voices from the Thames Water catchment area were heard, we undertook specific customer research alongside the consultation.

2.41 We commissioned independent research agencies to work with us to understand customers' priorities and preferences. We undertook two research studies during the consultation period – qualitative research with an online community to seek customer feedback to the consultation questions and key topics in the draft WRMP24 and a quantitative survey, led by Water Resources South East (WRSE) on behalf of the South East water companies, to seek feedback on customers' preferences for the composition of the draft South East regional plan.

2.42 The feedback from these research studies is presented in this report and considered alongside feedback from stakeholders, and new information and policy requirements, in the revisions to the draft WRMP24.

Qualitative customer research

2.43 The research was conducted on behalf of Thames Water by a specialist independent market research agency, Verve, using a digital pop-up community. A digital pop-up community is an accessible tool that can be accessed on a mobile, tablet, or laptop. Participants can take their time on the activities to fully understand the materials. By engaging with the materials participants gain knowledge on the topic at their own pace and by doing this, feel empowered to give their informed opinions on the topic.

2.44 Whilst the research was qualitative, to ensure we had a robust evidence base, and an ability to understand sub-groups with granularity, Verve recruited a large sample size and engaged 123 participants. The participant composition is shown in Table 2-7.

[14] Creating tomorrow, together: Our final methodology for PR24, Ofwat, December 2022

Demographic (Household n = 98)	% Attended	% TW customer profile
Male	51%	49%
Female	49%	51%
18-24	16%	18%
25-34	18%	18%
35-44	18%	18%
45-54	22%	18%
55 -64	19%	12%
65+	7%	16%

Demographic (Household n = 98)	% Attended	% TW Customer Profile
ABC1	70%	62%
C2DE	30%	38%
White	67%	74%
BAME	33%	26%
Vulnerable	9%	14%
Non-vulnerable	91%	86%
London WRZ	80%	78%
Thames Valley	20%	22%

Table 2-7: Qualitative customer research – participant composition

Source: Water Resource Management Plan – Thames Water, Qualitative Findings, Verve, May 2023

2.45 The community was open for 10 days in March 2023 with 5 days of activities. Each day, participants were asked for their initial view on an aspect of the draft WRMP24 before being presented with information from the consultation. The information was designed to be customer facing, using plain English and with clear examples to illustrate any technical aspects of the draft plan.

2.46 Participants were asked for feedback to the consultation questions as presented in Annex 3 and on the following specific topics:

- How acceptable is the draft WRMP24 plan to the wider Thames Water customer base?
- Do customers feel the draft WRMP24 is fair and proportionate or do they feel the forecast is overinflated?
- If they feel it is overinflated, what is driving this belief?
- What are people's attitudes to the threat of water shortages in the future versus the need for development and investment now?
- How do attitudes differ between people with an environmental outlook versus those who prioritise lower bills or limited disruption to their local areas?
- What impact does the perception of underperformance on leak management obligations have on support for the WRMP24?

2.47 Participants' initial, and subsequently informed, views of the draft WRMP24 were captured throughout. Their responses were kept private to avoid any influence.

2.48 The main points of feedback are noted in Section 4 of this report by topic. Verve also prepared an independent report[15] which provides further information on the methodology, results and conclusions.

Quantitative research

2.49 The research was conducted on behalf of WRSE by a specialist independent market research agency, Eftec, using an online survey. The survey included a representative quota of Thames Water customers. The research aimed to explore:

[15] 7120 Water Resource Management Plan – Thames Water, Verve, May 2023

- Customer preferences on the composition and characteristics of the best value plan in the context of potential alternative plans for the South East
- Customer preferences taking account of, and testing, the sensitivity to the bill impact

2.50 The approach, methodology and design was shared with the regional Customer Challenge Group throughout its development and refined in response to their feedback.

2.51 Over 1,700 household and business customers from across the region were recruited to participate in the interactive online survey. The participants were representative of the South East with quota sampling for household socio-economic and demographic circumstances (gender, age and socio-economic grade (SEG)) and non-household customers represented the economic sectors.

2.52 Participants were provided with contextual information to explain the challenges for future water supply; the draft best value plan and alternative plans with information on the sources of water (supply schemes, water transfers and demand management); how these sources could be used throughout the planning period; and a description of the alternative plans in terms of resilience, environmental impact and opportunity and carbon. The alternative plans were then presented again with information on the potential bill impact for customers. The presentation of information drew on research completed previously with customers to ensure the information was clear and easy to understand, and was tested and refined to improve the presentation of information.

2.53 Participants were asked questions and asked to give feedback on the draft best value plan and four alternative plans that differed in the mix of supply schemes and intensity of demand management measures as well as testing sensitivity to future bill impact by understanding at what "price point" customers switch away from the best value plan to something else. The feedback from customers on specific topics is presented in Section 4 of this report, alongside stakeholder's views.

2.54 Figure 2-5 shows the geographical distribution of household and business customers involved in this research. Detailed information on the approach, methodology, survey design and results is presented in the report prepared by independent market research agency, Eftec[16].

[16] Regional plan preferences prepared for WRSE, Eftec, June 2023

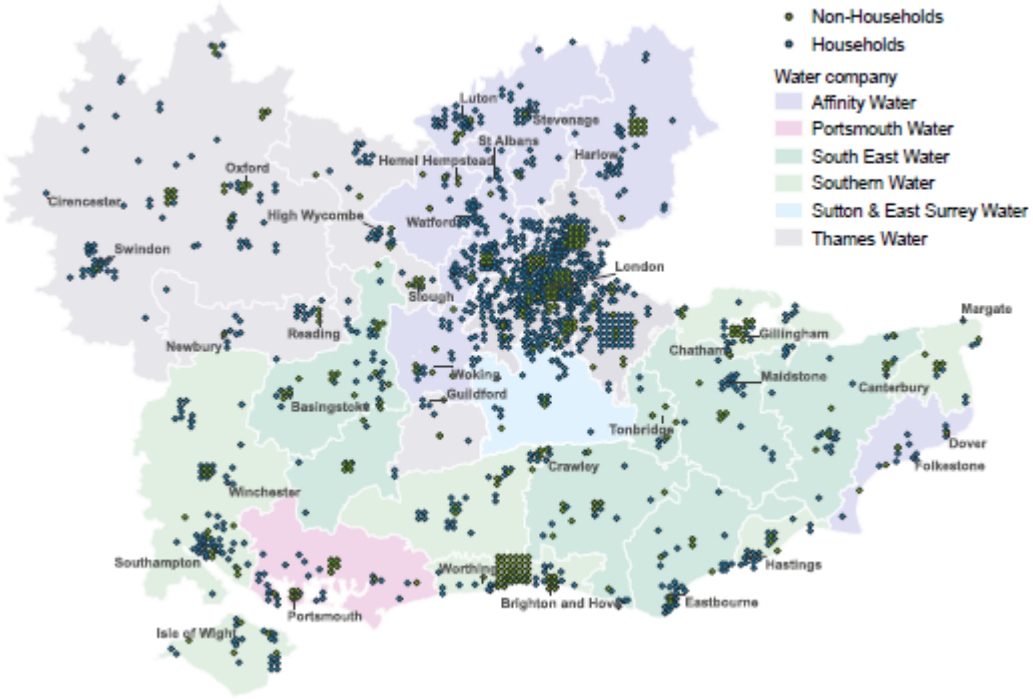


Figure 2-5: Household and business customers who participated in the research

Source: Eftec

New information

2.55 Since we prepared and published our draft WRMP24 new information has been published which is directly relevant to our draft WRMP24. This new information has been taken into account in consideration of changes to our draft WRMP24 and is summarised in this section.

Update to the Water Resources Planning Guideline

2.56 The EA, Ofwat and NRW jointly publish guidance for regional groups and water companies to follow in preparing the regional water resources plans and WRMPs. The guidance is called the Water Resources Planning Guideline. In preparing the draft South East regional plan and our draft WRMP24 we followed the guideline which was published in December 2021. In March 2023 the regulators updated and republished the guideline[17]. The main changes, as relevant to our draft WRMP24, are noted below:

- Reflected the requirements set out in the Environmental Improvement Plan, the first revision of the government's 25 Year Environment Plan, which includes targets for Per Capita Consumption (PCC), water demand for non-household customers and leakage reduction.
- Consideration of Ofwat's final guidance for PR24 to ensure clear links between WRMPs and business plans, through the production of long-term delivery strategies including planning for common reference scenarios.

[17] EA, Ofwat, NRW Water Resources Planning Guideline Version 12, March 2023

- Ensure the latest information from local authorities is used to forecast population and housing growth.
- Address existing unsustainable abstractions as soon as possible and prioritise those that are contributing to a current environmental problem or pose a deterioration risk by 2030 or as soon as possible thereafter, with interim solutions identified where needed.
- Review the 2022 prolonged dry weather / drought to consider issues and lessons learnt.

Environmental improvement Plan 2023[18]

2.57 The Environmental Improvement Plan (EIP) sets out how government plans to improve the environment, building on the vision set out five years ago in the 25 Year Environment Plan, with new powers and duties from the Environment Act and other relevant legislation. The EIP includes ten goals, one of which is to ensure clean and plentiful water with the following targets and commitments directly relevant to our draft WRMP24:

- Reduce the use of public water supply in England per head of population by 20% from the 2019 to 2020 baseline reporting figures, by March 2038, with interim targets of 9% by 31 March 2027 and 14% by March 2032 and part of the trajectory to achieving 110 l/h/d household water use and reduce non-household water use by 15% by 2050
- Restore 75% of our water bodies to good ecological status
- Cut leaks by 50% by 2050 with interim targets to reduce leakage by 20% by March 2027 and 30% by March 2032
- Target a level of resilience to drought so that emergency measures are needed only once in 500-years by 2040

2.58 The EIP also sets out that Government will roll out new water efficiency labelling, deliver the actions in the Roadmap to Water Efficiency in new developments and protect chalk streams by supporting the Chalk Stream Strategy.

Learnings from the 2022 drought event

2.59 There were two key issues identified following the 2022 drought event which are important in planning our long-term water supply. These are:

- **The availability of water to fill the west London reservoirs** - The reservoirs located in west London (Queen Mary, Wraysbury, Staines (North and South), King George VI, and Queen Mother) are filled by abstractions from the Lower River Thames, upstream of Shepperton Weir. During the drought the amount of water that we could abstract was restricted upstream of Shepperton Weir to refill the reservoirs to maintain river levels. We are undertaking an investigation which will allow us to understand the causes and review our assumptions for the abstractions from the Lower Thames to reflect the actual situation and ensure this is taken into account in future plans for water supply.
- **The "actual" benefits of water restrictions** - Following the prolonged dry weather over the summer 2022, we introduced a Temporary Use Ban (TUB) in August 2022 in line with our Drought Plan. In our Drought Plan we state the assumptions for the amount of

[18] Environmental Improvement Plan 2023 - First revision of the 25 Year Environment Plan, Defra 2023

water TUBs would save, based on experience from previous droughts. While there was a reduction in demand when the TUB was implemented, work is required to understand the impact that the TUB and media campaigns had on demand alongside changes in weather and other factors influencing customer demand.

Section 3

Main topics raised in the consultation

Introduction

3.1 In this section we have presented the main topics that were raised in the representations submitted to the public consultation on the draft WRMP24. A topic is defined as being raised by multiple respondents.

3.2 For each topic we have provided:

- An introduction to the topic
- A summary of the points raised by regulators and stakeholders, both organisations and individuals
- A summary of the views of our customers taken from the research studies, where this is available
- Our consideration of the points raised
- An overview of the changes made to the draft WRMP24 in response.

3.3 The topics presented in this report are:

- Population and property forecasts
- Climate change forecasts
- Environmental ambition forecasts
- Reducing demand for water – water efficiency and metering
- Reducing leakage
- Teddington Direct River Abstraction (DRA)
- South East Strategic Reservoir Option (SESRO)
- Severn Thames Transfer (STT)
- Best value planning and decision-making
- Adaptive planning and the monitoring plan

Population and property forecasts

Introduction

3.4 We worked in conjunction with the other water companies across the South East, through WRSE, to develop population and property forecasts, a component of the forecast for future water demand. The population and property forecasts were produced for WRSE by Edge Analytics, an external specialist consultancy in demographic analytics and scenario forecasting.

3.5 The Water Resources Planning Guideline sets out that the planned property and population forecasts must not constrain planned growth and the forecasts should be based on local plans published by the local council or unitary authority. We complied with the Guideline and produced forecasts using data from the local authorities in our supply area. In addition, we developed a range of forecasts using other data sources including forecasts produced by the Office of National Statistics (ONS) recognising the uncertainties of forecasting and the need to be able to adapt to a range of potential futures.

3.6 In the South East we forecast that population could grow by between 2% and 33% over the next 50 years, and in the Thames Water area the equivalent range is between 5% and 36%.

3.7 Our approach to forecasting future demand for water including population and property forecasts is presented in Section 3 of our revised draft WRMP24.

Consultee representations

Regulators

3.8 Ofwat raised the uncertainty around population growth forecasts. They requested further information to demonstrate that the uncertainty had been properly considered to ensure the programme delivers secure water supplies in the short and long-term, whilst not over-investing in solutions that may not be necessary or needed.

3.9 The EA queried a technical point around the trajectory for new property growth around the 2040s but did not provide substantive comment on our population forecasts.

Stakeholders - organisations

3.10 Several local planning authorities expressed support for the approach to accommodate planned levels of future housing growth in the population forecasts, reflecting the importance of ensuring that water resources planning and local plans were aligned. Some noted the need for flexibility, recognising the uncertainties in long-term planning.

3.11 Local authorities and Parish Councils located in Oxfordshire including the Vale of White Horse District Council, East Hanney Parish Council and East Hendred Parish Council stated that they considered that the population forecasts were over estimated and therefore inflated the planning challenge.

3.12 Oxfordshire County Council suggested that the population forecasts were inflated. They provided detailed comments on the growth forecasts and stated that they considered it was

unacceptable to use outdated population projections and that the most up-to-date forecast data from ONS should be used.

3.13 Stakeholders who opposed SESRO argued that the forecasts were inflated. The Group Against Reservoir Development stated that, in their view, the population estimates were over-stated and challenged whether the population forecasting method used is fit for purpose. The Group Against Reservoir Development proposed, at a high level, what they considered to be a simpler and more realistic process involving the use of the latest ONS Principal Projection to determine expected overall population growth as the basis for strategic level planning and local plan housing data to determine the location and timing of future 'hotspots', allowing infrastructure plans to be finessed at the operational level. Similarly, CPRE (The Countryside Charity) also set out its position that the future population growth was over estimated, highlighting considerable uncertainties in population projections arising from uncertain future migration patterns. Although it recognised that choosing a lower growth scenario may go against Guidance it considered it possible to put together robust arguments for such a decision.

3.14 Other stakeholders noted that the approach taken to assess future household water needs appeared to be robust and thorough.

Stakeholders – Individuals

3.15 A number of individuals commented on the pressures that increasing population will have on future water demand and the need to plan ahead to provide an adequate water supply for the future.

3.16 Other individuals commented that the population forecasts used in the draft WRMP24 were out of date and over estimated growth in comparison to government and ONS population forecasts. Individuals expressing these views were mainly objectors to SESRO who were of the view that Thames Water is using these figures to justify the need for SESRO.

3.17 Some individuals stated that they believed there was a need for independent verification of the population and property forecasts used in the draft WRMP24.

New information

3.18 We have changed our base year, the year from which we begin our forecasts, from 2019/20 to 2021/22. This was the most recent reported year at the time of modelling and was largely free from COVID-19 restrictions.

3.19 Following the consultation WRSE commissioned Edge Analytics to produce updated population and property forecasts for the South East region. Edge Analytics updated the growth forecasts based on local authority plans in December 2022, therefore any changes in local plans since 2020 have been captured as part of this process. Edge Analytics also used the Census 2021 information where it is available, but it should be noted that Census 2021 with sub-national population projections (SNPP) and national population projections (NPP) has not yet been released by ONS. We therefore continue to use the most recent release of these forecast which are the ONS 2018 SNPP and 2020 interim NPP.

3.20 WRSE also commissioned an independent consultancy, Artesia, to prepare updates to the non-household demand forecasts to take account of new data and information.

Our consideration

3.21 We have updated the population forecast data based on the updated forecasts prepared by Edge Analytics utilising the most recent ONS population and household data and updated information from local planning authorities.

3.22 We have complied with regulatory guidance for water resources planning, and the population forecast adopted in our "reported pathway", which underlies our preferred programme pathway, remains based on local authority plan-based population projections. Our WRMP24 would not be supported by EA and Ofwat if we did not adhere to the regulatory guideline.

3.23 Some respondents criticised the "reported pathway" presented in the draft WRMP24, and the level of growth associated with it. As explained in our draft WRMP24, the "reported pathway" is a single potential future, which adheres to regulatory guidance and it is not more or less likely than the other 8 adaptive plan pathways identified. The draft WRMP24 covers all of the adaptive plan pathways, from the lowest to the highest levels of growth, ensuring that the water resources proposals are able to adapt to the levels of future growth experienced.

3.24 Within our adaptive plan, the forecasts cover a wide range of potential levels of population growth that we could experience, so we have planned for best case, worst case and others in between, ensuring that the plan is capable of adapting over time to levels of growth that are experienced. The growth scenarios used within our adaptive plan are:

- Local authority housing need based
- Local authority plan based
- ONS (ONS18 SNPP through to 2050 and ONS20 interim NPP beyond 2050)
- ONS low scenario
- OxCam 1a - a scenario used to investigate the population growth trajectory that may occur should the OxCam growth corridor proceed

3.25 Whilst we recognise that there are respondents who disagree with the basis for the forecasts, we consider that we have developed, and used, an appropriate range of forecasts as a robust basis for long-term planning. We acknowledge that there will be changes to future growth plans as local authorities prepare and update their local plans, and as Government updated population projections are published over time. We will review population data through the WRMP Annual Review process, and changes to forecasts will be reflected in future WRMP plan cycles.

3.26 In response to the challenge for the need for independent scrutiny, WRSE commissioned an independent peer review of the population and property forecasts which concluded *"that this is a thorough, well-documented analysis that has provided the best available demographic and property forecasts for each of the WRSE companies"* [19].

[19] Population and Property Forecasts Developed by Edge Analytics for WRSE for Resource Planning in PR24 An Assessment of Suitability: Professor Adrian McDonald, May 2023

Changes to our draft plan

3.27 We have updated the data in our draft plan based on the updated forecasts prepared by Edge Analytics utilising the most recent ONS population and household data, and updated information from local planning authorities. The plan-based and ONS forecasts for our draft WRMP24 and the revised draft WRMP24 are presented in Table 3-1.

		Base Year	2024-25	2029-30	2049-50	2074-75
Plan Based	dWRMP24	10,112	10,631	11,017	12,345	13,137
Plan Based	rdWRMP24	10,384	10,749	11,311	12,839	13,270
	Difference	272	118	294	494	133
ONS18	dWRMP24	10,112	10,337	10,496	11,096	11,821
ONS18	rdWRMP24	10,384	10,495	10,645	11,164	11,547
	Difference	272	158	149	68	-274

Table 3-1: Comparison of population forecasts (000s) in the draft and revised draft WRMP24

Source: Thames Water revised draft WRMP24 Section 3

3.28 We have also updated the demand forecasts to reflect a new base year compared to that used for the draft WRMP24. The combined effects of these factors are summarised in Table 3-2.

		Base Year	2024-25	2029-30	2049-50	2074-75
Plan Based	dWRMP24	2626.71	2514.08	2549.55	2715.54	2773.80
Plan Based	rdWRMP24	2574.12	2515.49	2588.42	2839.65	2835.63
	Difference	-54.598	1.4	38.87	124.11	61.83

Table 3-2: Updated baseline demand forecast for the draft and revised draft WRMP24 (Ml/d)[20]

Source: Thames Water revised draft WRMP24 Section 3

3.29 All of the updated forecasts and demand information are set out in Section 3 of the revised draft WRMP24.

[20] In the draft WRMP24 we included assumptions for action government committed to take in our baseline demand forecast. In line with changes to the WRPG, we have removed forecasts of government-led action from our forecast. This is the reason that the baseline demand forecast in the revised draft WRMP24 is initially above the draft WRMP forecast, but transitions to being below it.

Climate change forecasts

Introduction

3.30 Climate change impacts are one of the key challenges for water resources in terms of the impacts on existing water sources.

3.31 The majority of points raised in representations in respect of climate change were related to the forecasts of climate change and the impacts of climate change on our water resources and as such this section focuses on supply-side climate change assessments.

3.32 The Water Resources Planning Guideline requires assessment of the risks of climate change and the likely implications for current and future sources of water. There are also supplementary guidance documents on climate change impact assessment and incorporation with stochastic weather datasets which guide the approach we have taken in our assessments.

3.33 In our draft WRMP24 we used the most recent climate change projections produced by The Met Office, known as UKCP18, and assessed how climate change will impact the amount of water available for supply during droughts.

3.34 We forecast that we would need an additional 48 Ml/d of water under low climate change scenario, 122 Ml/d under the median scenario, and 186 Ml/d under the high climate change scenario to replace the supplies we expect to lose as a result of climate change by 2075.

3.35 This work also helped identify which of our current sources are most at risk from climate change. These are typically river sources that are more reliant on rainfall to maintain flows.

3.36 Our approach to forecasting the impact of climate on supply is presented in Section 4 of our revised draft WRMP24, with further detail of the assessments undertaken presented in Appendix U.

Consultee representations

Regulators

3.37 Ofwat and EA noted that in the long-term we had used a high climate change scenario from the UKCP18 projections and stated that this could potentially drive investment to meet an extreme climate scenario which may not occur. They asked for justification of our approach.

3.38 Ofwat suggested that we should consider using a less extreme forecast to plan to, in particular post 2030, when risks can be managed through adaptive planning. Ofwat also asked that we set out the impact of the common reference scenarios compared to the most likely scenarios on which the draft plan is based and the expenditure that is required for planning for the high and low scenarios.

3.39 The EA asked for information on the impact of climate change on the available water in each zone across our supply area and how uncertainty had been accounted for in the draft plan.

Stakeholders - organisations

3.40 A number of stakeholders stated the need to plan properly for climate change now and expressed support for the approach taken by WRSE and Thames Water to ensure resilience in water supply. Some stakeholders also highlighted the urgency and need to act swiftly including the Greater London Authority (GLA) and The Richmond Society who noted that the climate crisis, and its effects, are already evident and it is important to take action now, to secure water supplies for the future.

3.41 Some stakeholders including Cotswold District Council agreed that we should take an adaptive planning approach to take into account different futures with trigger points that allow us to change course.

3.42 Oxfordshire County Council (OCC) challenged that the draft plan fails to factor in the possibility of severe disturbances to weather patterns before 2040 and we should be following a 'resilience first' approach. OCC also commented that there is no sign that the draft plan has considered what it believed would be the appropriate prioritisation of climate-resilient schemes. It saw this as a fundamental flaw and regarded the de facto 'bet' on reservoirs delivering in the late 2030s/ 2040s as complacent, short-sighted, and backward-looking.

3.43 Some other respondents, predominantly those who are opposed to SESRO challenged that worst case forecasts had been used. They proposed that the median climate change scenario would be more appropriate to use rather than the high scenario for planning.

3.44 The Group Against Reservoir Development stated that we had over-stated the planning challenge and in respect of climate change we should remove climate change impacts up to the present day and adopt a "medium" scenario from then on, and a move to a "1 in 500-year" level of resilience in 2035.

3.45 Other stakeholders recognised that we need to plan ahead to ensure a resilient water supply as we move into a period of greater climatic uncertainty but objected to some of the proposed measures in the draft plan, this was in the main the local communities and individuals in the vicinity of the proposed new water sources.

Stakeholders – individuals

3.46 Several individuals expressed their support to plan for climate change with reference to climate change projections prepared by the Met Office.

3.47 Some individuals, who mainly opposed SESRO, argued that the highest emission scenarios had been used and these were one extreme of the range.

3.48 Other individuals stated their disagreement with the approach arguing that more consideration needs to be made of the opportunities to recharge aquifers and existing storage, again these points of opposition tended to be from individuals who opposed the development of SESRO.

New information

3.49 The updated Water Resources Planning Guideline advised consideration of the findings set out in updated projections of future water availability for the third UK Climate Change Risk Assessment to help demonstrate the robustness of our assessment.

Our consideration

3.50 In response to concerns raised that in using the high emissions scenarios in the UKCP18 projections we may be planning for an extreme climate change future and biasing our plans towards over-investment, this is not the case. In Appendix U of our revised draft WRMP24 we have explained that we initially carried out detailed modelling using only a limited range of projections (RCP8.5 – high emission scenarios) but have supplemented these with a wide range of projections from UKCP18, using all emissions scenarios available. We have selected individual results from the more detailed modelling results and have selected scenarios such that the projections adopted in our "Low", "Medium" and "High" projections represent a reasonable range of potential climate futures across the whole range of the UKCP18 projections (not just RCP8.5). When considering the 3,000+ climate change projections that we have investigated, the scenarios adopted as our Low, Medium and High scenarios are approximately 25th, 50th and 75th percentiles projections. As such, while we began with data from RCP8.5, through mapping and selection of scenarios we have ensured that we have appropriately considered data from across the UKCP18 projections.

3.51 There appears to be an implicit assumption that more severe emissions scenarios will generally result in greater climate change impacts. As discussed in Appendix U, evidence from our modelling suggests that this is not necessarily the case. The main observation from our modelling is that whichever emissions scenario we consider there is a wide range of potential future climate change impacts and significant uncertainty, indicating that there is a complex relationship between climate change and impacts on the water supply system. The trend of "warmer, wetter winters and hotter drier summer" interacts with our supply system, which is most vulnerable to multi-season drought events, in a complex way.

3.52 Some stakeholders were critical of having adopted the "High" climate change forecast in our "reported" pathway. The WRSE investment modelling tools have a limited number of adaptive "branches" that can be considered, and in order to consider a branch point for population growth sufficiently early, we then have to branch on climate change and Environmental Destination at the same time. The Environment Agency advised[21] us that we should consider the "High" Environmental Destination scenario as our primary planning scenario. The Environmental Destination scenarios in Appendix 4 of the National Framework for Water Resources are based on a severe climate change scenario (the driest of the scenarios from the Future Flows dataset) and thus use of this climate change scenario is consistent with use of the "High" Environmental Destination scenario. While our preferred programme is based on a single branch, it is important to note that, within our adaptive planning approach, all three climate change scenarios are considered in the WRSE investment model, meaning that use of the "High" climate change scenario does not bias our initial investment programme towards over-provision of new resources. It is also important to note that the range of uncertainty between the "High" and "Low" scenarios of

[21] Verbal Direction provided by a senior EA staff member to WRSE

climate change is equivalent to 138 Ml/d, which is significantly less than the range for the other drivers namely, environmental ambition and growth.

3.53 The Group Against Reservoir Development has suggested that climate change has not, to date, increased drought risk. The evidence that the Group Against Reservoir Development uses to justify this claim is that three severe droughts occurred during the first half of the twentieth century, and only one severe drought has occurred since. We do not consider that the evidence presented should alter our approach to considering climate change impacts, as the Water Resources Planning Guideline Supplementary Guidance on stochastics states that monthly precipitation in Central England was stationary until approximately 2010, and as such recommends use of a baseline period ending in 2000. We have used a robust approach which complies with the requirements of the Water Resources Planning Guideline.

Changes to our draft plan

3.54 We have not made changes to the climate change data used in our revised draft WRMP24 because we have used the best available information. We consider that we have used an appropriate range of forecasts and our approach is compliant with regulatory guidance.

3.55 We have provided additional explanation regarding how uncertainty of climate change impacts has been factored into our planning, and we have provided an explicit comparison of the scenarios considered in our revised draft WRMP24 with those referenced in the Ofwat Long-term Delivery Strategy guidance in order to justify the scenarios that we have adopted.

Environmental ambition and forecasts

Introduction

3.56 We take water from surface water (rivers) and groundwater (underground water-holding rock formations, known as aquifers) for public water supply, this process is called abstraction. Abstraction can have an impact on the health of our environment as it can affect river flows, ecology and wetlands. Over the past 25 years we've reduced the amount of water we take from the environment by 134 Ml/d and taken steps to protect some of our most sensitive rivers, including the chalk-fed River Darent and River Pang, but there's more to do to help to protect vulnerable rivers and chalk streams and adapt to climate change. An important objective of our revised draft WRMP24 is to protect and improve the environment, considering both current and future challenges.

3.57 The National Framework for Water Resources set out that regional water resource plans must develop an agreed environmental plan to achieve sustainable abstraction by 2050, called the environmental destination.

3.58 The Water Resource Planning Guideline reflected the National Framework and set out the environmental requirements that should be included in WRMPs and stated that where abstraction is not sustainable, the problem should be addressed as soon as possible; where abstraction is contributing to a current environmental problem or poses a deterioration risk in the near future, action should be prioritised by 2030; where this is not possible, water companies should plan to deliver the required abstraction reduction by the earliest feasible time and identify improvements that could be delivered in the interim to improve resilience.

3.59 Alongside WRSE, we worked with the EA and other environmental organisations, including those involved with the development of the Chalk Stream Strategy, to consider the scale, pace and location of reductions in our abstractions and to develop long-term scenarios to ensure our abstractions are sustainable[22]. We included three of WRSE's scenarios in our plan – high, medium and low. Following the WRMP guidelines and the National Framework for Water resources our preferred programme includes the 'high' environmental destination scenario.

3.60 Further information on our approach to reducing our abstractions from rivers and groundwater and delivering environmental improvements is presented in Section 5 of our revised draft WRMP24.

3.61 The scale and pace of our environmental ambition is a significant driver for future investment, and we asked a specific consultation question on our approach (Consultation Question 1). Consultees responded to the question as well as providing wider comments on our abstractions and protection of the environment more generally.

[22] WRSE Environmental Advisory Group meetings held in spring 2022

Consultee representations

Regulators

3.62 The EA welcomed the ambition and recommended that we needed to do more to demonstrate that we are planning to achieve sustainable abstraction as quickly as feasible. The main points raised in the EA's representation in relation to environmental ambition were:

- Reducing abstractions that impact the environment is a statutory requirement and that we should more clearly outline the legal minimum requirements of the environmental destination as well as proposed improvements.
- The narrative of the draft plan currently overstates the level of uncertainty around the environmental need compared to other types of uncertainty and this should be reviewed.
- Feasibility and timing of the delivery of some of the licence reductions, including the Lower Lee abstraction reduction, should be reviewed to enable environmental protection and improvements to be delivered within the timescales set out as being required by the National Framework for Water Resources, being by 2050.
- Additional detail should be provided for each sustainability reduction scenario at a licence level, the expected outcome for the environment and the benefit for protected areas.

3.63 Natural England (NE), whilst supportive of the environmental destination, raised concern it does not go far enough, fast enough nor is it prioritised in the correct locations to meet the nature recovery obligations, particularly in relation to designated sites. NE also highlighted that whilst supportive of measures to improve chalk streams and rivers, we also need to consider other water-dependent sensitive habitat when considering licence reductions.

3.64 Ofwat asked for clarification of the impact of environmental destination abstraction reductions on available water supply in the early phase of the draft plan. Ofwat raised the importance of considering a plausible low scenario as well as the high scenario used in the preferred programme. Ofwat also set out the need for sufficient evidence of the need for reductions to justify the investment.

Stakeholders - organisations

3.65 A large number of stakeholder organisations expressed their support to protect the environment and reduce abstraction, with several arguing for faster action, and many providing commentary on specific watercourses including Action for the River Kennet, Letcombe Brook project and the Wandle Catchment Partnership.

3.66 Chalk Streams First noted that whilst there has been considerable reduction in chalk stream abstraction since the late 1980s, there remains significant pressure on chalk streams. It expressed support for the focus on abstraction reduction in the draft plan, the prioritisation methodology and the need for timely delivery of the prioritised abstraction reductions with comments provided on specific rivers.

3.67 South East Rivers Trust (SERT) welcomed the focus on the environment and stated their support for the high environmental ambition scenario to provide the highest level of improvement as quickly as possible and noted that they are keen to see abstraction reductions prioritised from sensitive chalk streams and headwaters first. Amongst the points

raised SERT flagged concern about the lead time and urged that investigations are progressed in the next five years (AMP8) to allow decisions to be made by 2030 as well as making points on specific reduction proposals including Epsom and the Wandle.

3.68 The Angling Trust stated their support for the approach taken in planning for the highest level of environmental improvements and asked that we go further in terms of the reduction in abstraction, the development of more water storage options and the use of nature based solutions both in the provision of retaining water in the environment and improving the quality of the water for both fish and people. They argued that given both the biodiversity and climate crises, both of which are impacting our rivers, fish, wildlife, and the availability of water now, we should act as soon as possible and should not wait.

3.69 Overall, there was support from local authorities for reducing the amount of water abstracted to protect the environment however, there were a range of views on the scale and pace. Some proposing that the scale of reductions was too great, whilst others suggested that the reductions planned for were not sufficient or required earlier intervention.

3.70 Oxfordshire County Council (OCC) stated that they are not convinced there is a good cost-benefit analysis behind selecting the high scenario. They also stated that they understand the priority to reduce abstractions from chalk streams but suggested that it needs to be considered in the round with other environmental issues for example the rest of the river network where there are discharges of raw sewage. They stated that there is a limit to the amount bill payers can be expected to fund and they think there is likely to be more benefit from using the funds elsewhere. They also stated that they do not agree with the inclusion of SESRO on the basis of needing to aim for high levels of abstraction reduction.

3.71 The Vale of White Horse District Council and South Oxfordshire District Council stated their support for aiming for the highest level of environmental improvements however they challenged the consideration of the environmental impacts of a new reservoir as a solution and suggested that smaller, better distributed water storage facilities would have a lesser impact on the environment.

3.72 The Group Against Reservoir Development considered that there was little transparency of the detail and justification for what it considered were large losses of deployable output arising from “environmental improvements” and challenged whether the costs of environmental improvements exceeded the value of benefits. It considered that in view of the scale and costs of environmental improvements, no decisions should be taken on new resource schemes until the proper and transparent prioritisation of abstraction reductions has been completed, taking account of the costs of replacement sources and their environmental impacts.

3.73 CPRE commented that there is considerable uncertainty in the new water resource required to return the chalk streams to a pristine state, and the plan adopts the worst case. CPRE also noted that investigations over the next 10 years will provide the evidence base for future reductions in abstraction, and considered that there are clearly many gaps in knowledge about the best way to restore our chalk streams and supported the Chalk Streams First and the DEFRA-sponsored ‘Catchment Based Strategy’ which recommends priority for streams where abstraction exceeds 10% of recharge.

Stakeholders – individuals

3.74 Overall respondents supported the level of abstraction reduction to be delivered, and the environmental benefits that this would provide. Some wanted greater action sooner, whilst others had concerns that the environmental impacts of proposed new resource developments could be greater than the benefits from abstraction reduction.

Customer research

3.75 Protecting and benefiting the environment was supported, and the collaboration with the EA provided a level of reassurance to customers, although there were mixed responses on the scale and pace of the ambition. Issues were raised around why action hadn't been taken sooner, the level of confidence in the delivery of solutions, responsibility for dealing with this issue and the cost implications, with requests for transparency around how reductions in abstraction may impact them, as customers, both in terms of disruption and bill increases. Some main themes were:

- Accountability and responsibility, with suggestions that there was a need for greater involvement of national and local government.
- The potential bill impact, particularly in the current cost-of-living crisis. Some customers felt there are more pressing societal issues that make it difficult for them to prioritise environmental improvements to areas that they do not live in or visit. Some customers called for greater transparency on how bill increases are calculated or distributed between areas.
- Some customers suggested that whilst they want to protect the environment, they do not necessarily wish to pay for it, arguing that the cost should not be placed solely on the customer, and that everyone is accountable for the damage made to the environment.
- Whilst other customers supported the importance of planning ahead and if no action is taken now, then it will be more costly in the future and so there is a higher sense of urgency.

3.76 Using AI analysis, which codes sentiments scoring them from 0 – 5 (0 being most negative and 5 being most positive) around two thirds of customers were positive about plans to reduce abstractions at a faster rate (sentiments scoring 4 – 5) with around one third scoring 3 or below as shown in Figure 3-1.

Figure 3-1: AI recorded sentiment to plans to reduce abstraction at a faster rate

Note: 0 being the most negative and 5 being the most positive.

Source: Verve, May 2023

New information

Since the draft plan we have submitted our proposals for 2025-2030 to the EA, called WINEP. We have received initial feedback from the EA and have amended data used in environmental ambition forecasts including the prioritisation of catchments and sites, 'glidepaths' towards achieving outcomes, and the consideration of alternative profiles put forward by those commenting on the plan.

Our consideration

3.77 Achieving sustainable abstraction is a key driver for our WRMP24, we feel it is the right thing to do to improve, protect and maintain our precious rivers and chalk streams. The scenarios that we have included in our draft WRMP24 are in line with regulatory guidance.

3.78 We received a wide range of representations from regulators, stakeholders and our customers on our proposed environmental ambition and as such, we recognise that we will not be able to produce a plan which pleases everyone. Our draft plan considered scenarios of licence reduction ranging from around 110 Ml/d to over 500 Ml/d in supply capability reduction and we consider that, given the representations received and the requirement for an adaptive plan, we should continue to look at a range of scenarios.

3.79 Some stakeholders suggested that we should not consider all of the licence reductions in the High scenario as being realistic or feasible. The National Framework for Water Resources sets out how environmental destination should be included in Regional Plans and subsequently company plans, therefore we do not consider that any abstraction reductions can be removed from the High scenario We do, however, recognise the need

to consider other potential futures, and for this reason that we have considered other scenarios with significantly lower overall requirements for abstraction reduction within our adaptive plan.

3.80 While we consider representations from all stakeholders, our primary consideration must be to the requirements of legislation and guidance. Overall, the representations from our environmental regulators was that the "High" scenario is the right approach. It is our view that protecting the environment is a key driver of our planning, so we will continue to base our preferred plan on this scenario. It should be noted that all scenarios are considered in our adaptive plan and we will continue investigations as set out in our monitoring plan which is detailed in Section 11 of the revised draft WRMP.

3.81 We have taken on board the EA's representation regarding the weight that should be given to the guidance set out in the National Framework for Water Resources, and have amended our scenarios of abstraction reduction to ensure that all licence reductions are made by 2050.

3.82 In response to representations around the need to accelerate activity, we have reviewed the profiles of licence reduction to identify opportunities for acceleration.

3.83 The EA was critical of the degree of uncertainty which we presented within the narrative surrounding the need for future abstraction reductions. We acknowledge that reducing abstractions that impact the environment is a statutory requirement and should be reflected as a 'must do' and have therefore amended the narrative in the revised draft WRMP.

Changes to our draft plan

3.84 We have ensured all reductions are made by 2050 in the high scenario in line with policy requirements set out in the National Framework. This includes bringing forward reductions in the Lower Lee and in the Northern New River Wells (NNRW) from 2060 to 2050.

3.85 We have reviewed all reductions to understand if we can bring reductions forward and have advanced the reductions at Farmoor and Ashton Keynes from 2050 to 2040. We have also moved back the licence reduction at Epsom from 2030 to 2035 in response to EA representation on the WINEP submission.

3.86 We have amended the profiles of licence reductions during AMP8 to comply with the EA's "licence capping" policy.

3.87 We will continue detailed investigations as set out in our monitoring plan which is included in Section 11 of the revised draft WRMP24.

Reducing demand for water – water efficiency

Introduction

3.89 We are committed to ensure we make the most of our available water resources. We have an established programme to support our household and business customers to use water wisely and since 2015 we've installed around 1 million smart water meters in customers' homes to help them understand their water use and encourage them to save water. We also work closely with government and other stakeholders, including Waterwise, to bring forward new policy and measures to help to ensure we use water wisely such as an incentive scheme for housing developers to encourage new housing developments to achieve water neutrality.

3.90 In 2021 government set a national target to reduce household water use to 110 litres per head per day (l/h/d) by 2050. The current water use per person in the South East is significantly higher than this, around 150 l/h/d, and in Thames Water's area it is around 141 l/h/d. How we use water at home is driven by a range of factors such as housing type, level of affluence, household size and personal choices. The data from smart water meters is helping us to understand better our customers' water consumption and enable us to target measures to help customers more specifically.

3.91 In our draft plan we set out our proposals to continue to work closely with households, businesses and partners to make every drop count reducing average water use from around 141 litres per head per day (l/h/d) to around 125 l/h/d by 2050, and with the introduction of government led initiatives we forecast that a further reduction in water use could be achieved to around 123 l/h/d by 2050. We explained that this is above the government's national target of 110 l/h/d but that we developed our approach drawing on the best available evidence of what we considered to be achievable. We also considered that to set an unachievable goal would threaten the security of our water supply, put more pressure on the environment, and potentially force us to develop alternative sources of water at short notice, which may not then be the best value solutions for our customers.

3.92 As part of the public consultation, we specifically asked a question on our approach to reducing demand (question 2) and sought feedback on the extent to which we should rely on measures which are not directly within our control, noting the consequence for security of water supply (question 3).

3.93 During the public consultation the Water Resources Planning Guideline was updated which set a requirement for all water companies to plan to achieve a reduction in water use to 110 l/h/d by 2050, with interim targets up to 2050, and also a 15% reduction in water use by businesses by 2050.

3.94 Further information on our approach to reducing demand is presented in Section 8 of the revised draft WRMP24.

Consultee representations

Regulators

3.95 Regulators set out that we should plan to achieve 110 l/h/d for household water use by 2050 (in a dry year scenario) and a reduction in distribution input of 20% by 2037 or if these targets are not considered to be feasible clearly justify and evidence why this is the case.

3.96 Regulators also stated that we should plan to work with businesses to achieve reductions in water demand and achieve the targets set out in the government's Environment Improvement Plan. Furthermore, this activity should involve collaboration with water retailers to achieve these targets.

3.97 The EA expressed concern that the draft WRMP24 is not adaptive to demand management in the short-term and asked us to consider different profiles of demand management delivery through sensitivity testing and also to test the outcomes if savings are not achieved.

3.98 Ofwat requested that we provide additional information on the activities to deliver the targets committed to for the current 5-year period to 2025 and how the demand reduction programmes, as presented in the draft plan, were compiled.

3.99 Ofwat also asked for further information and explanation of metering costs and savings as the metering cost for Thames Water's programme were perceived to be high when compared to other companies. Ofwat requested evidence to justify why the preferred metering option is best value from a technology and timing of investment perspective.

3.100 Natural England stated that they consider it is imperative that water companies seek significant demand management measures to remove existing detrimental impacts on the environment and allow nature to recover as soon as possible and not wait until new supplies come on-line. However, Natural England also commended Thames Water's candour in respect of the high level of uncertainty associated with achieving the national demand reduction target set by government.

Stakeholder – organisations

3.101 Overall stakeholders supported the focus on measures to reduce demand for water, with a wide range of comments on the additional measures that need to be taken to achieve a step change in the way we use and value water. ARK stated that they would like to see the roll out of smart metering and stepped tariffs to help customers manage water use, as well as joined up publicity and messaging from across water companies and NGOs to raise awareness of the need to use water wisely and create a better understanding of the water resource challenges we all face.

3.102 There were a large number of responses indicating that stakeholders want us to be more ambitious in our demand reduction activities and that we should aim to achieve the national target of 110 l/h/d target. Several respondents called for faster roll out of smart water meters and more innovation in our approach. Oxfordshire County Council set out that we should aim to achieve the government's target of 110 l/h/d sooner than 2050. Similarly, the Vale of White Horse District Council wanted to see more ambitious targets and suggested that Thames Water could also facilitate customers to harvest rainwater and store it for gardening

and non-drinking water uses like flushing WCs and work with landowners and farmers to provide more at "source" storage.

3.103 Parish and town councils located in Oxfordshire all challenged that more focus and ambition should be placed on reducing water demand.

3.104 The Group Against Reservoir Development noted that under the proposals in the draft plan Thames Water failed to achieve the Government target of 110 l/h/d in 2050 by a large margin. It stated that if the Government's target was achieved, then the need for new supplies in areas potentially supplied from the Abingdon reservoir would be reduced.

3.105 Some stakeholders, including the Angling Trust, stated their support for further action on demand reduction solutions and the need to drive innovation in this area but given the impacts of climate change and the projected economic and population growth forecasts they stated that we need to progress with both demand reduction and the development of new sources of water.

3.106 A number of stakeholders recognised that water companies cannot take sole responsibility and that collective action is needed. CPRE stated that Government has a considerable responsibility to help with public education and to update Building Regulations (the latter should ensure all new buildings, and renovations, are water efficient and contain rainwater harvesting and internal household water recycling systems).

3.107 Waterwise has outlined a strategy for water efficiency going forward. This is in tune with responses from stakeholders, with focuses on efficiency education and support for customers, water efficiency for new developments, improvements to meter data provided to customers, and improvements to appliances in the home.

3.108 MOSL, the Market Operator of England's Non-Household Water Market, requested more clearly laid out detail around demand reduction proposals for business.

3.109 CCW queried whether the adaptive planning framework enables Thames Water to take account of both under, and over, delivery of demand reduction and flex in regard to the promotion of new water infrastructure.

Stakeholder – individuals

3.110 Overall individuals supported further efforts on demand reduction. Individual respondents stated that government-led interventions such as water labelling, and new housing regulations should be lobbied for by Thames Water going forward.

3.111 Individuals were supportive of measures focussing on high water users and the roll out of smart meters as a tool to encourage the efficient use of water.

3.112 There were also several positive comments around the use of grey water reuse and rainwater collection, both on a small scale (e.g., water butts), or on a large scale (infrastructure development).

Customer research

3.113 Customers had a low awareness of the average water usage of a person in the UK per day and supported actions to raise awareness and help people to understand the amount of water everyday items (such as white goods) use, to encourage collective action to respect

water and use water efficiently. They also supported smart meters as a tool to encourage the efficient use of water. The majority of customers felt that they were already water efficient and it's for others (customers, house builders, businesses) to reduce their consumption.

3.114 There was a common view that Thames Water are experts in the field and understand the data and that the proposed conservative approach was more realistic and likely to succeed compared to the Government's proposed target. The overall sentiment was these targets are extremely important to ensure there would be no situation where the region runs out of water, and Thames Water is doing a good job in flagging these problems now rather than further down the line when the situation would be unsalvageable.

3.115 There was also a feeling that Thames Water should not penalise customers too harshly without first doing more to prevent water lost through leakages.

New information

3.116 Since the publication of our draft plan, government has published the Environmental Improvement Plan which now requires water companies to plan to plan to achieve water use of 110 litres per person per day (l/h/d) on average by 2050.with an interim target of 122 l/h/d by 2038 and for non-household customers a reduction in water use of 9% by 2038 and 15% by 2050. These targets are reflected in the WRPG.

3.117 Government has set out new legally binding targets under the Environment Act 2021 to reduce the use of public water supply in England per head of population by 20% by 2038.

Our consideration

3.118 Representations to the consultation has shown the extent of support for the efficient use of water and greater ambition to achieve reductions in water use.

3.119 The government and regulators have also set out their expectation for ambition to achieve greater reductions in water use.

3.120 We have listened to the representations and in response we have undertaken additional work on the water efficiency options.

3.121 We reviewed the household demand reduction options proposed which comprise both tried and tested options and innovative solutions. The innovative measures include exploration of incentives for high water using households and options for rainwater harvesting, stormwater harvesting and greywater recycling. In our forecasts we have increased our estimates for water savings for these innovative measures and tariffs in later years. These are largely untested and will require careful monitoring.

3.122 We reviewed our proposed measures for business customers and considered an extended range of measures as noted in Table 3-3.

Option	AMP8	AMP9	AMP10	AMP11	AMP12
Smart water meter upgrades	0.5	2.4			
Smarter business visits	23.4	15.0	8.0	6.0	4.0
Continuous flow targeting	4.5	6.0	6.0	4.0	3.0
Retailer-led activity	0.5	1.0	1.5	2.0	2.0
Tariffs			1.0	2.0	3.0

Table 3-3: Forecast reductions in water use by business customers (Ml/d)

Source: Thames Water

3.123 Working with WRSE we have reviewed the assumptions for a range of government-led policies and in discussion with regulators we have adopted a more ambitious scenario which is referred to as the Government C+ scenario. The Government C+ scenario includes policies and measures such as water labelling and changes to Building Regulations, not all of which have been funded or committed to, but the scenario assumes delivery of 24 l/h/d reduction by 2050.

3.124 Our revised draft WRMP24, taking account of actions we will lead alongside actions government will lead, means we are now aiming to achieve the target of 110 l/h/d for household customers and a 15% reduction in water use by business customers by 2050.

3.125 Demand reduction measures, including leakage reduction and drought measures, make up around 80% of the forecast water shortfall by 2050. The successful delivery of these targets is not fully within our control and the success will require collaborative action with government, stakeholders and our customers. We will manage the risk through monitoring performance and the adaptive plan.

Changes to our draft plan

3.126 We have reviewed and included additional demand reduction options for both household and business customers. Many of these are largely untested and will require careful monitoring.

3.127 We have included a more ambitious programme of government-led policies and in discussion with regulators we have adopted a scenario which is referred to as the Government C+ scenario. Again, this will require careful monitoring.

3.128 Investment in water efficiency to reduce domestic and non-household demand, supported by Government interventions, is designed to meet government requirements and now plays an even more significant role in our long-term plan for water supply. The combination of measures to tackle leakage, to reduce demand, together with drought measures now contribute around 80% of the forecast shortfall by 2050.

3.129 More detailed information on the demand reduction measures is included in Section 8 of our revised draft WRMP24.

3.130 We are committed to achieving these significant reductions in water use and will work collaboratively to achieve these commitments however the scale of the challenge cannot be under-estimated and there are delivery risks. We have included additional information in the monitoring plan which is presented in Section 11 of our revised draft WRMP24 and will monitor and report progress as part of the WRMP annual review.

Leakage reduction

Introduction

3.131 Reducing leakage is a priority for us. Currently around 24% of the water we provide to our customers is lost through leaks from our own network of pipes and our customers' pipes. We know it's not acceptable to be losing so much precious water and we are investing significantly to tackle this.

3.132 We have a target to reduce leakage by 20% over the 5-year period from 2020 to 2025. The weather conditions during 2022/23 were challenging, with the drought during the summer followed by freeze-thaw, such that we're currently behind where we'd like to be on our leakage performance, but we are committed to remedy this and achieve our targets.

3.133 Leakage management and demand reduction were the foundation of our draft plan and made up over half of the water shortfall forecast by 2050. In our draft plan we set out that we plan to reduce the amount of water lost through leaks from our network and customer pipes and meet the government priority of halving leakage by 2050.

3.134 We plan to start with the most cost-effective interventions including helping customers find and fix leaks on their water pipes, and on our own network of water pipes, enabled and targeted with the assistance of the installation of smart water meters; and then move onto the more costly and complex measures such as renewing our water network which is needed to support continued, sustainable reductions in leakage.

3.135 Further information on our proposed leakage programme and the rationale for the programme is presented in Section 8 of the revised draft WRMP24.

Consultee representations

Regulators

3.136 Ofwat referenced the Environmental Targets (Water) (England) Regulations 2023 and the government's strategic priorities which include halving leakage across the industry by 2050, in comparison to 2017-18 levels. Ofwat also stated that companies with higher relative leakage levels should consider going beyond the 50% reduction target.

3.137 Ofwat asked that we set out why our 2050 target is optimum in the context of its long-term supply demand balance position and significant proposed investment in new water resource schemes.

3.138 Ofwat challenged the range of leakage reduction activities considered and the transparency of information on these, and the glide path noting that the draft plan only appeared to consider a single profile to achieve the 2050 target and asked for evidence of testing profiles to show an optimal programme.

3.139 Ofwat also noted that Thames Water proposes a reduction of approximately 30% reduction on the 2019-20 baseline by 2030 which represents an additional reduction of 9% beyond the company's PR19 performance commitment of a 20% reduction. Ofwat requested evidence of target testing for 2025-30 delivery, and an explanation of its decision-making process and justification for the selected leakage reduction.

3.140 The EA challenged Thames Water's past performance on leakage and stated that the company needs to improve its leakage reduction and they 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 given the current levels of leakage.

3.141 Natural England stated their support for the target to achieve 50% leakage reduction by 2050 and flagged the interim targets set out in the Environmental improvement Plan.

Stakeholders – organisations

3.142 The majority of stakeholders supported priority action to tackle leaks. There were a number of comments on Thames Water's current performance on leakage, which was considered to be poor in comparison to the rest of the water sector; that the target of halving leakage by 2050 is not sufficiently ambitious and more stretching targets should be set and delivered sooner; and more innovation to tackle leakage. The focus on leakage reduction and acceleration of activity was raised by the GLA, the River Thames Society, Swindon Borough Council, Freshwater Habitats Trust, Friends of the River Crane and many other stakeholders.

3.143 Some opponents to SESRO suggested that fixing leaks would cause less environmental damage than building a new reservoir and if leakage is tackled properly it would negate the need for a new reservoir. Consultees raising these points included Gloucester City Council, Wantage and Grove Campaign Group and Vale of White Horse District Council.

3.144 The Group Against Reservoir Development expressed concerns that the planned reductions to leakage are targeting mostly the London Water Resource Zone, with insufficient action outside London.

3.145 CCW noted that the plan to reduce leakage by 50% by 2050 is economically suboptimal as it represents an expensive option. CCW asked for evidence that alternative leakage reduction strategies had been tested with customers both from the perspective of cost and implications for the effect on customer behaviour and customer demand.

Stakeholders – individuals

3.146 There were a large number of comments in relation to leakage. The majority were concerned about the current high levels of leakage and supported ambitious leakage reduction targets, with some suggesting that we should go beyond the target.

3.147 A number of respondents who commented on leakage were critical of Thames Water's current performance and considered that more focus is needed to modernise the infrastructure and fix leaks ahead of developing new sources of water.

3.148 There were also respondents who highlighted the need for a balanced approach comprising both measures to tackle leakage and demand alongside developing new source of water to ensure a resilient water supply for the future.

Customer research

3.149 Most customers were shocked by the amount of water that is lost through leaks and felt Thames Water should have acted earlier to address leakage.

3.150 The majority of participants supported the target to halve leakage by 2050, stating that the target seemed to be reasonable given the length of time and disruption to fix water pipe infrastructure in a heavily populated area like London. Some participants felt reducing the leaks by a further 16% by 2030 and halving the leaks by 2050 does not go far enough and that Thames Water should aim for more ambitious targets.

3.151 Customers felt that Thames Water should tackle leaks as a priority prior to penalising customers in terms of curtailing water use.

New information

3.152 Since the publication of the draft plan, the Water Resources Planning Guideline has been updated, and the Government's Environmental Improvement Plan published, which include interim targets for leakage of 20%, 30% and 37% of the 2017/18 level, by 2026/27, 2031/32, and 2037/38 respectively en route to achieve 50% leakage reduction by 2050.

Our consideration

3.153 We achieved our leakage target for several years up to 2021-22, however 2022 was a very hard year in terms of leakage as it was directly affected by the weather. We saw higher levels of leakage as a result of the dry summer followed by the cold snap during the winter which meant we had to fix around 70% more leaks than normal. As a result, we did not achieve our target for 2022/23 but we remain focused on achieving our regulatory target for the five year period from 2025-2030.

3.154 Our goal of halving leakage by 50% by 2050 (from 2017/18 levels) is ambitious and operationally challenging, however in response to representations, we have examined scenarios that would achieve the interim targets and higher leakage reduction targets both sooner and later. We have proposed a leakage reduction target which exceeds 50% reduction by 2049/50 in our revised draft plan which we consider responds to expectations.

3.155 We have included further evidence and explanation of the leakage reduction options and the costs and benefits of the options in Section 8 of our revised draft WRMP24 to transparently explain our approach and the evidence for our proposals. This includes more information on leakage innovation which we are focused on with our research team and our supply chain as this will be pivotal to achieving and sustaining lower leakage levels in a cost effective way.

3.156 In the period between now and 2040 it would not be possible to deliver enough leakage reduction to negate the need for the proposed reservoir. The cost of the mains replacement, to achieve the required reduction, would be around four times the cost of the reservoir. Furthermore, the level of disruption to customers, in terms of traffic congestion and daily water supply, would not be acceptable.

3.157 Our plan to reduce leakage is more intensive in London Water Resource Zone than other areas, this is because of the higher level of leakage that occurs in London, reflecting the extent and age of the water supply network. Furthermore, the installation of smart water meters has been focused in London to date therefore providing us with granular data on water flow which is essential to effectively target leakage both on the network and on customers' water supply pipes.

3.158 In summary, we are committed to reducing the amount of water that is lost through leaks, but we need a balanced approach whereby we continue to reduce leakage cognisant of the cost of the activity and impact on customer bills, as well as the societal impact with the nuisance of street works whilst leakage repairs and mains replacement are undertaken.

3.159 We will monitor progress and the government's Environmental Improvement Plan's interim targets, aiming to reduce leakage by 20% by 31 March 2027 and 30% by 31 March 2032, and give clear monitoring points against which actual delivery performance can be measured. This is part of our monitoring plan presented in Section 11 of our revised draft WRMP24.

Changes to our draft plan

3.160 In our revised draft WRMP24 we have set out that we plan to achieve over 50% reduction in leakage by 2050, and have included additional information on our leakage reduction programme and interim targets.

3.161 We will continue to focus on London Water Resource Zone recognising the extent of leakage and the potential for reductions, but we will also monitor and assess data from our other areas to make sure that reduction activities are applied in a timely way.

3.162 Investment in leakage reduction now plays an even more significant role in our long-term plan for water supply. The combination of measures to reduce leakage and to reduce demand together with drought management measures now make up around 80% of the forecast shortfall by 2050.

Teddington Direct River Abstraction

Introduction

3.163 The Direct River Abstraction (DRA) is a drought resilience scheme located in west London.

3.164 The DRA scheme comprises a new abstraction on the River Thames close to Teddington Weir. The abstracted water would be pumped into the existing Thames-Lee-Tunnel (TLT) for transfer to the Lee Valley reservoirs and treatment at Coppermills Water Treatment Works, before being distributed across London for customers to use.

3.165 To compensate for the additional water that would be abstracted, and ensure we maintain the flow in the river, treated water would be taken from Mogden sewage treatment works (STW), and would be transferred to the river. The treated water would normally be put into the Tideway, the tidal stretch of the River Thames downstream of Teddington Weir, but for this scheme a portion of the treated recycled water would undergo an extra stage of treatment at a new plant on the Mogden STW site before being transferred via a new underground pipeline and discharged to the River Thames, upstream of Teddington Weir.

3.166 The input of recycled water to the River Thames will ensure sufficient flow remains in the river during periods of abstraction. The Environment Agency would set the requirements for the quality of the recycled water that would be put into the river to make sure the river and the environment is protected.

3.167 A schematic illustration of the scheme is shown in Figure 3-2.

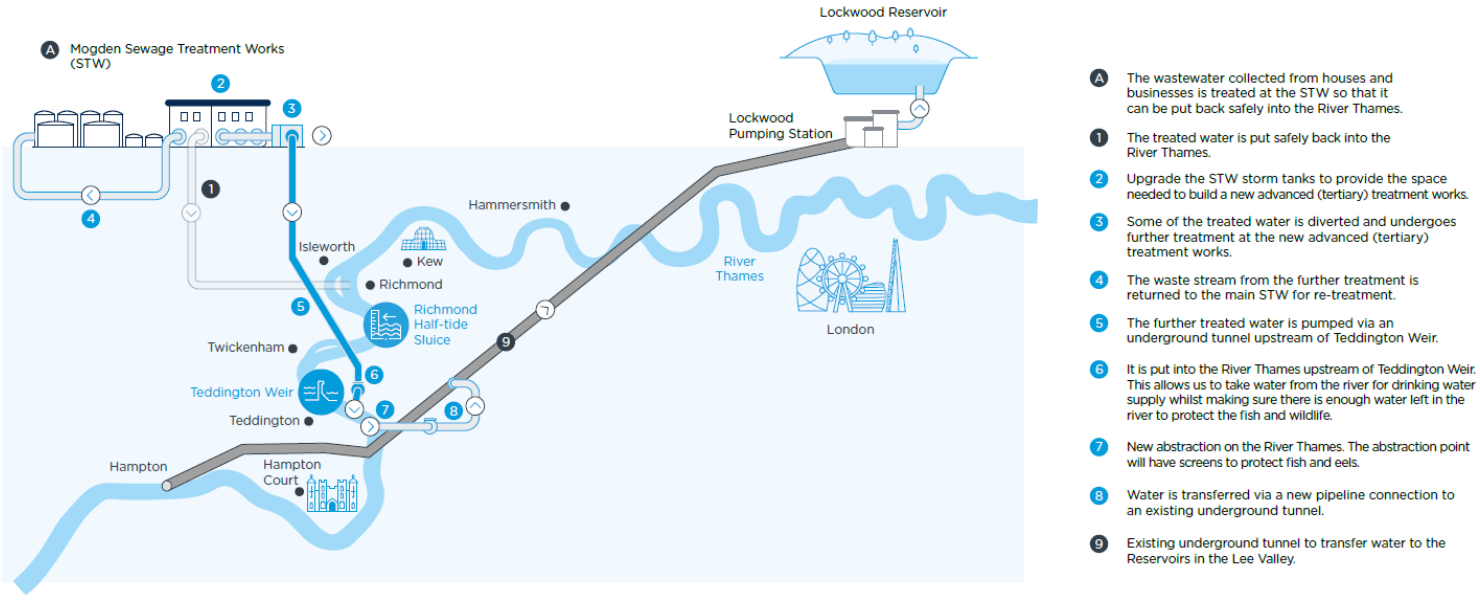


Figure 3-2: A schematic illustration of the Teddington Direct River Abstraction scheme

Source: Thames Water

3.168 A misconception of this scheme is that it would bring raw sewage into the river upstream of Teddington Weir. To be absolutely clear, there is no risk of untreated sewage entering the river via the DRA scheme. A portion of treated recycled water from Mogden STW would

have an additional stage of treatment to ensure the safe discharge of water to the River Thames.

3.169 The scheme had been included in Thames Water's previous draft WRMP, WRMP19, but it was removed from the draft WRMP19 following concerns raised by the EA in respect of the potential environmental impact. Since WRMP19 further work has been undertaken to assess the feasibility of the scheme, overseen by the Regulators' Alliance for Progressing Infrastructure Development (RAPID), and with close working with the EA, Natural England (NE), the Drinking Water Inspectorate (DWI) and the Port of London Authority (PoLA) and a much smaller scheme has been proposed in the draft WRMP24 of 75 Ml/d.

3.170 During the consultation period we engaged with local politicians, local authorities – both elected members and officers - and the local community. We held information events in the locality of the scheme, an online webinar to provide information on the proposed scheme and to answer questions and one-to-one meetings.

3.171 Further information on the DRA scheme is available on our website www.thames-wrmp.co.uk and also in the regulatory reports submitted to RAPID, referred to Gate 1 and Gate 2 reports[23].

Consultee representations

Regulators

3.172 The EA stated that it still has significant concerns about the environmental impact of the scheme and the feasibility studies for the scheme should continue to be progressed as part of the RAPID process, with identification of appropriate mitigation. The EA also stated that alternative solutions should be identified to ensure options are available should the scheme be deemed infeasible, and this should be part of adaptive planning.

3.173 The EA challenged the mitigation of altering the Lower Thames Operating Agreement should there be a delay to the proposed DRA scheme. The EA requested discussion on the viability of this proposal noting potential environmental impacts. It also requested consideration of alternative mitigation measures.

3.174 Ofwat raised queries on the costs and benefits of the scheme, alongside other supply side schemes, and stated that sufficient and convincing evidence needed to be provided that the costs and benefits are robust and efficient.

3.175 NE stated their agreement with the assessments completed on protected sites but raised uncertainty on the impacts on sensitive environmental receptors such as protected species of fish and riverine habitats. NE sought more thorough consideration of potential mitigation beyond general types of measures.

Stakeholders - organisations

3.176 Representations were received from a number of local organisations raising concerns in relation to the scheme including the Darent and Cray Catchment partnership, Friends of

[23] London water recycling Gate 1 and Gate 2 regulatory reports www.thameswater.co.uk/sro

the River Crane, Richmond and Twickenham Friends of the Earth, Surrey Wildlife Trust, River Thames Boat Project, Old Chiswick Protection Society, The Bluetits Chill Swimmers Ltd. The main points of concern raised in relation to the scheme were:

- The need for the scheme, suggesting more focus is needed on tackling leakage and making the best use of available water resources ahead of developing this scheme
- The need to consider alternative schemes with water recycling in east London proposed as an alternative
- The quality of the recycled water that will be transferred to the freshwater River Thames to compensate for the additional abstraction from the river and the resultant impact to the river environment and its ecology, levels of water in the river and the safety for river users.
- The increase in the river water temperature, nutrient load, algal blooms and salinity and the potential impact on the flora and fauna, these concerns were heightened as the scheme is planned to operate during drought when there would be lower levels of flow in the river and therefore there were concerns that impacts would potentially be exacerbated.
- The location and appearance of new infrastructure on the river bank
- The safety of this infrastructure for river users
- The impact of the construction on the local area, with particular concerns about green areas
- Concern that whilst the proposed scheme is 75 Ml/d, the size of the scheme may be increased in size in the future

3.177 A number of stakeholders acknowledged the work completed to date is at the conceptual design stage and were keen to have further information on the water quality and environmental monitoring and modelling as the work progressed. These organisations included the Habitats and Heritage and Twickenham Parliamentary Constituency.

3.178 The Port of London Authority (PoLA) acknowledged that the smaller scheme would have lesser impacts on the tidal River Thames, but it raised ongoing concerns about changes to water levels or flow arising from the scheme may impact on the safety of navigation and its use, the river regime and its environment and ecology, and specifically the need to maintain the river level upstream of Richmond half-tide weir. PoLA stated that until the issues raised are fully addressed, they object to the draft plan.

3.179 The Zoological Society for London (ZSL) raised concerned about the potential temperature increase and the climate change scenarios used in this analysis, as well as the disruption of sediment which could remobilise pollutants.

3.180 Some stakeholder organisations stated their support for the scheme including CPRE who stated that they consider water recycling schemes to be scalable, adaptable and have low environmental impacts and they stated that the DRA scheme should be implemented as soon as possible, and could be expanded further if environmental concerns are fully addressed. The Colne Valley Fisheries Consultative noted it was a good concept, relatively quick and cost effective and that the scheme, alongside the reservoir, should be progressed as a priority.

3.181 London Borough of Richmond highlighted the strength of feeling amongst local residents and communities to the proposed scheme which reflected the connection Richmond residents feel to the River Thames and the depth of the concern about the potential impact

on the River Thames. The strength of feeling was also emphasised in responses from Parliamentary constituencies including the Twickenham Parliamentary Constituency.

Stakeholders – Individuals

3.182 A large number of representations were received from individuals who opposed the scheme. These representations raised similar issues to those raised by some of the local organisations, namely concerns about the impact of the transfer of treated wastewater on the water quality of the river and the local environment, a lack of confidence and trust in Thames Water and the regulators to ensure the scheme was designed and operated without detriment to the environment or public health.

3.183 The main concerns raised in representations received from individuals were the following: the lack of assessment and modelling that had been completed to date and as such concerns could not be fully answered; the deterioration of the river in terms of water quality and biodiversity and also public health; the development of buildings on the river bank, which is widely used by the local community and visitors, and which could detract from the beauty of the riverbank.

3.184 The river is well used for recreational water supports and swimming and there were a large number of representations, and a petition, which raised concern about the transfer of recycled water upstream in the river and the perceived impacts of this in terms of the environment and public health.

3.185 There were several positive responses on the scheme, these were from individuals who recognised the pressures faced for our future water supply and the need to find new sources of water including water recycling; and individuals who opposed SESRO and were keen to promote this scheme in preference to the development of a new reservoir in Oxfordshire.

Customer research

3.186 Customers were provided with information on the proposed scheme. The information included a high-level description of the scheme, information about how the scheme would work, as well as concerns raised by the local community. Overall customers responses to the scheme were mostly positive, noting the scheme was low cost, low carbon, relatively quick to implement and there will be environmental safeguards. Whilst there was some sympathy to the objections, overwhelmingly customers felt the benefit to water supplies outweighed any local concerns around environmental harm to this part of the river.

3.187 There were some concerns raised namely around the risk of process failure causing environmental harm, the use of chemicals to clean the water and that development is in keeping with this part of the Thames.

3.188 Figure 3-3 shows the sentiment by age group in relation to this scheme using the AI analysis which shows that overall there was a high level of support for the scheme amongst customers.

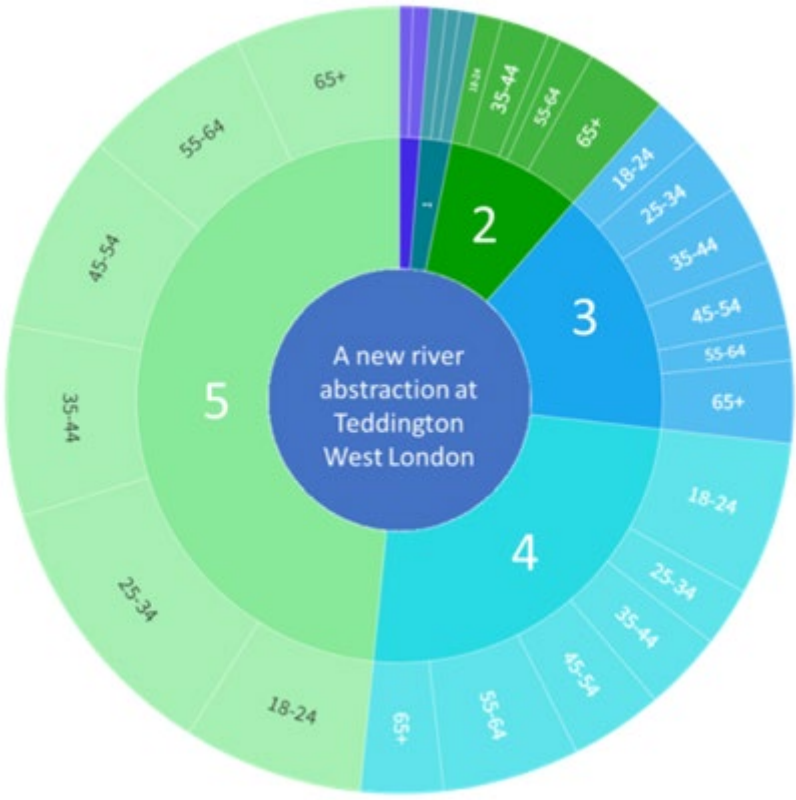


Figure 3-3: AI recorded sentiment to a new abstraction at Teddington by age group

Note: 0 being the most negative and 5 being the most positive.

Source: Verve, May 2023

Our consideration

3.189 We have looked at a wide range of solutions to meet the shortfall between the amount of water we have and the amount we need. These solutions include reducing demand, creating new sources of water and improving catchment areas. Working with Water Resources South East (WRSE) we've assessed a large number of options for cost, water output, the time to deliver the scheme, potential impact on the environment, carbon footprint, and futureproofing. This process has led to the selection of a programme of leakage and customer usage reduction, as well as developing new sources of water and the DRA scheme, among others, is part of an overall best value plan for the period 2025-2035.

3.190 We were disappointed that the nature and operation of the scheme was misrepresented in the national and local media which consequently prompted significant concern in the local community that the environment and quality of the river would be harmed. Protecting and enhancing the environment is central to our long-term plan for water and the proposal for this scheme. The work completed to date[24] has shown that the DRA scheme is feasible and

[24] Gate 1 and Gate 2 regulatory submissions to RAPID, July 2021 and November 2022

provides a viable way of providing an additional source of raw water during periods of prolonged dry weather.

3.191 The scheme feasibility is proven with the development of a concept design and the environmental appraisal work completed to date has shown that the risk of significant environmental effects is low for the size of the scheme that is proposed (75 Ml/d), which is planned only to be run at these levels during drought conditions.

3.192 We have also shown that mitigation measures exist, should they be required, to meet current legislation requirements for water quality standards but also should the EA impose increased constraints and treatment performance through the permitting process.

3.193 We have listened to the concerns raised by the local community, both local organisations and individuals, and have responded as fully as possible based on the assessments that have been completed to date. Our responses have been published[25] in two documents: a Frequently Asked Questions (FAQ) note and a Q&A document, which was produced following the webinar held in late February 2023.

3.194 We have committed to further work as the scheme progresses through the ongoing RAPID gated process, and the planning and permitting regime, which will refine the scheme design, environmental assessments and mitigation measures. The further work will include monitoring, modelling and assessment of water quality, water level and velocity, algae, and ecological and biodiversity assessments and mitigation, which are issues most commonly raised by the local community and residents. We will continue to work closely with the EA, NE, DWI, local authorities and other stakeholders as we progress this work.

3.195 We are committed to engage openly and transparently with stakeholders and the local community. We held a river users forum in spring and have committed to continue this forum; meetings with local MPs and councillors; as well as several one to one discussions with local stakeholder organisations and individuals. We have appointed a dedicated engagement manager for the scheme to ensure there is a point of contact and we endeavour to respond promptly and fully to queries and questions. We will share information at timely intervals and there will be further information and public consultation as part of application for planning consent, if the scheme is taken forwards, to ensure everyone is given the opportunity to have their say on the proposals.

3.196 In planning future water supply for the next 50 years, we have taken an adaptive approach to ensure we can adjust to whatever the future holds, as such our draft plan includes alternative water recycling schemes which will continue to be assessed so that these schemes can be brought forward if the DRA scheme is deemed to not be feasible.

Changes to our draft plan

3.197 The DRA scheme is selected as offering best value to customers and provides a viable new source of water during periods of drought allowing us to move to 1 in 200-year resilience in the early 2030s.

3.198 The work completed to date shows the scheme poses a low risk to the environment and river users and as such the 75 Ml/d scheme is retained as one of our preferred schemes in

[25] www.thames-wrmp.co.uk

our revised draft WRMP24 albeit with a later delivery date of 2033. The scheme continues to be designed to provide 75 Ml/d during drought and dry weather conditions, but is not designed to run at these levels all year. The later delivery date reflects the timeframe needed to complete the additional monitoring and assessments.

3.199 We will complete further work to address actions set through the RAPID gated process, work on the River Thames Scheme – the EA's flood alleviation scheme in the Lower Thames - and further work on the Lower Thames abstraction capability following the drought experienced in summer 2022.

3.200 We have included more information in the monitoring plan presented in Section 11 of our revised draft WRMP24 drawing on this further work to ensure we have sufficient time to take account of the information in making decisions on future investment in water supply.

South East Strategic Reservoir Option

Introduction

3.201 The South East Strategic Reservoir Option (SESRO) is a new storage reservoir which would be sited in the Upper Thames catchment, south west of Abingdon in Oxfordshire. The reservoir would be filled with water from the River Thames during periods of high river flow. When river levels drop, or demand for water increases, water would be released back into the River Thames for re-abstraction downstream. The reservoir would help to protect supplies and manage future water quality issues created by a changing climate as well as offering regional and local benefits, including environmental and biodiversity improvements and public access and recreation.

3.202 A schematic illustration of the scheme is shown in Figure 3-4.

Figure 3-4: Illustrative conceptual design for SESRO (150 Mm^3)

Source: Thames Water

3.203 The reservoir has been considered as a potential new water supply scheme over the past three decades and most recently it was included in Thames Water's and Affinity Water's previous WRMPs (WRMP19). Since WRMP19 further work has been undertaken to assess the feasibility of the scheme, overseen by the Regulators' Alliance for Progressing Infrastructure Development (RAPID), and with close working with regulators, representatives of the neighbouring local authorities, Vale of White Horse District Council and Oxfordshire County Council as well as other stakeholders who have specific interest in the scheme or technical expertise on a specific topic.

3.204 The studies have looked at a range of potential reservoir sizes from 75 Mm^3 to 150 Mm^3 as well as building the reservoir in two phases.

3.205 The WRSE work concluded that a new reservoir is an integral part of the best value plan for the South East and in the public consultation on our draft WRMP24 we set out the need for a reservoir of at least 100 Mm^3 to provide water to Affinity Water, Southern Water and Thames Water customers by 2040.

3.206 Information on the approach to identify and assess new water supply options is presented in Section 7 of our draft WRMP24. Information on the assessment and decision making process to determine the best value plan is presented in Sections 10 and 11 of our draft WRMP24. Information on the studies completed to date to assess the feasibility of the reservoir and develop the conceptual design of the scheme is reported in the regulatory submissions to RAPID[26].

3.207 As part of the public consultation we set out the decision making completed to date and specifically asked a question on the size of a new reservoir (Consultation question 4).

3.208 We have proactively engaged with local MPs, local authorities, local parish councils, interested organisations and the local community throughout the public consultation to respond to questions and queries in relation to the draft WRMP24 and the inclusion of the proposed reservoir in the draft South East plan and our draft WRMP24 from 2040.

Consultee representations

Regulators

3.209 The EA sought further evidence to justify the best value plan, including the selection, size and alignment of the options included in the draft plan. The EA specifically commented on the decision making around the size of the reservoir, noting that the decision on the size of the reservoir is marginal, and recommended that the resilience and environmental benefits of the various reservoir options were reviewed to ensure the plan provides the best value for customers across the region and the environment. The EA also recommended that the wider benefits for the environmental destination and the achievement of this, should be reviewed with each size of SESRO.

3.210 The EA acknowledged that the reservoir would cause disruption to local residents in the area during its construction and they expect Thames Water to manage these issues appropriately.

3.211 Ofwat noted that the size of the reservoir is a finely balanced decision, and asked that sensitivity testing and sufficient and convincing evidence is provided in the final plan on the decision.

3.212 Ofwat noted the need to consider the inter-relationship of other investment proposals across the South East in the decision making. Specific references were made to the recent changes to Southern Water's Hampshire Water transfer and Water recycling and the deliverability risks associated with this proposal, as well as interactions with other strategic resource options.

[26] SESRO Gate 1 and Gate 2 reports www.thameswater.co.uk/sro

3.213 Ofwat noted that the costs for SESRO have not changed in over five years and asked that further evidence be provided on the robustness and reliability of the costs, and consideration of how changes in scheme costs could impact on the options selection.

3.214 NE asked for further information and explanation in the Strategic Environmental Assessment and Habitats Regulation Assessment for SESRO, as well as other schemes. NE identified specific protected sites and habitats for which it would like additional information such as Cothill Fenn Special Area of Conservation.

3.215 NE stated that the reservoir will significantly and permanently alter the landscape in which it is built and will impact the landscape features of the setting of the North Wessex Downs Area of Outstanding Natural Beauty (AONB) and noted that the scheme presents opportunities for landscape improvements, and careful design will be essential to ensure local landscape character is not just protected, but also enhanced.

3.216 Historic England noted that it had previously had involvement on SESRO however it requested greater clarity about the location of proposals, where they are known, so all parties can consider the potential impacts of proposed development.

Stakeholder – organisations

3.217 There were a large number of representations from a range of stakeholder organisations in respect of the reservoir.

3.218 The Vale of White Horse District Council (VoWH DC) and Oxfordshire County Council (OCC) set out their opposition to the reservoir and requested a public inquiry. Both OCC and VoWH DC raised a number of points in relation to the draft plan and the reservoir including the needs case - with challenges to the forecasts of population growth and the cost benefit case for a high environmental scenario; the need for further ambition to reduce leakage and make the best use of available water resources; the significant adverse environmental effects of the reservoir; the carbon impact; the scale of the reservoir; the construction period and the impact on local communities; flood risk; landscape; archaeological significance of the site; achievability of biodiversity net gain and whether the proposed recreation benefits can be provided; and concerns in regard to safety and dam breach. The councils also proposed that there are better solutions and stated their support for the Severn Thames Transfer. Furthermore, both councils argued that water should not be shared with Southern Water and schemes should considered that provide water closer to where it is needed.

3.219 A number of parish and town councils in the vicinity of the reservoir including Ardington and Lockinge, East Hanney, East Hendred, Tetsworth, Great Haseley, Wantage Town Council set out their opposition to the reservoir. The main points raised in these representations were: perceived exaggeration of the need for the water; that the water is transferred to London and the wider south east, it is not required locally; the availability of better alternative solutions including water recycling in London and the Severn Thames Transfer which is cited by some councils as a preferred scheme; the priority to fix leaks and achieve lower PCC ahead of new infrastructure; the environmental impact during and after construction; the appearance and visual impact; the increased risk of local flooding; the perceived lack of experience of constructing a reservoir of this size; the safety of the structure; and the disturbance and impact to the local communities during the construction period. Some

parish councils also challenged the transparency of the plan making stating that the details of the plan are not clear and nor are the costs.

3.220 Some local stakeholders expressed frustration that despite the reservoir first being proposed around three decades ago the assessments are still at a feasibility stage, and as such it is not currently possible to answer some of the questions raised with sufficient detail to alleviate concerns. East Hendred Parish Council specifically asked when an Environmental Impact Assessment will be prepared stating that no scheme of national and regional significance should be included in a management plan prior to consultation on an Environmental Assessment.

3.221 The Group Against Reservoir Development, a group set up specifically to oppose the development of a new reservoir in Oxfordshire, submitted a detailed representation presenting its objections to the reservoir. The main points that were set out in the representation were: the drivers to the shortfall were overestimated including unrealistic sustainability reductions and suggestion that a medium climate change scenario should be adopted; need for more ambitious targets for demand reduction and leakage reduction; the need for new water sources was overestimated, a portfolio of adaptable schemes should be progressed instead of the reservoir and the Thames to Southern transfer should be abandoned; challenges to the carbon, biodiversity net gain and natural capital assessments and challenges in respect of the safety of the reservoir.

3.222 Beyond Oxfordshire, Gloucester City Council raised opposition and proposed that there are better alternatives with less environmental and community impact, and the Freshwater Habitats Trust suggested that water recycling and transfers should be adopted first in the hierarchy of additional supplies and that a new reservoir would disproportionality affect the Ock catchment.

3.223 There were a number of local organisations who would be affected by the proposals and whilst they do not object to the reservoir in principle, recognising the need for a secure and sustainable future water supply, they want more proactive engagement and involvement to ensure issues and concerns are fully understood and addressed.

3.224 There were also a number of stakeholders who set out their support for investment in new water infrastructure, including the reservoir. These organisations included the GLA, London Assembly, Dacorum Borough Council, Thames Rivers Trust, River Thames Society, River Chess Society, The Angling Trust and the Wilts and Berks Canal Trust.

3.225 The Angling Trust argued the need to be able to store more water as a vital part of water management in the future. The Thames Rivers Trust and River Chess society argued that it is vital that the reservoir is initiated as soon as is possible, noting it is the most certain of the solutions. The GLA and the London Assembly noted the importance of the reservoir in securing water supply resilience in times of drought and that bringing the reservoir online at the earliest possible date will help to ensure the highest possible environmental standards and increase London's water resilience. GLA also stated the importance of early and ongoing engagement with the communities affected to help shape the plans, secure wider benefits and that low / zero carbon energy sources are used for construction and operation.

3.226 Specifically on the size of the reservoir the Mayor of London suggested the need for careful examination of the 100 Mm^3 versus the 150 Mm^3 reservoir capacity options to check whether the larger size option could be the better investment for customers in the longer

term, particularly if we progress down a path of more intense climate related weather disruption than expected.

3.227 Some stakeholders provided some specific comments on the reservoir scheme which were helpful including Network Rail who advised on requirements for construction in the proximity of Network Rail's assets.

Stakeholder – individuals

3.228 A large number of representations were submitted by individuals which included comments on the reservoir, principally objecting to the development of the proposed reservoir.

3.229 The majority of individuals who set out their opposition to the reservoir reside in the locality of the proposed reservoir as shown in Figure 3-5. The main points raised in opposition were that the needs case was not justified; there are better alternatives to the development of a new reservoir; the water is not needed in the local area and is being transferred to other areas in the South East; the scheme is being pursued for commercial gain by Thames Water; the scheme is not resilient to our changing climate; the environmental and carbon impacts are significant; the lengthy construction period will have a detrimental impact on the local communities; the local character of the area would change; it would exacerbate local flooding; and safety specifically due to natural disaster or terrorism.

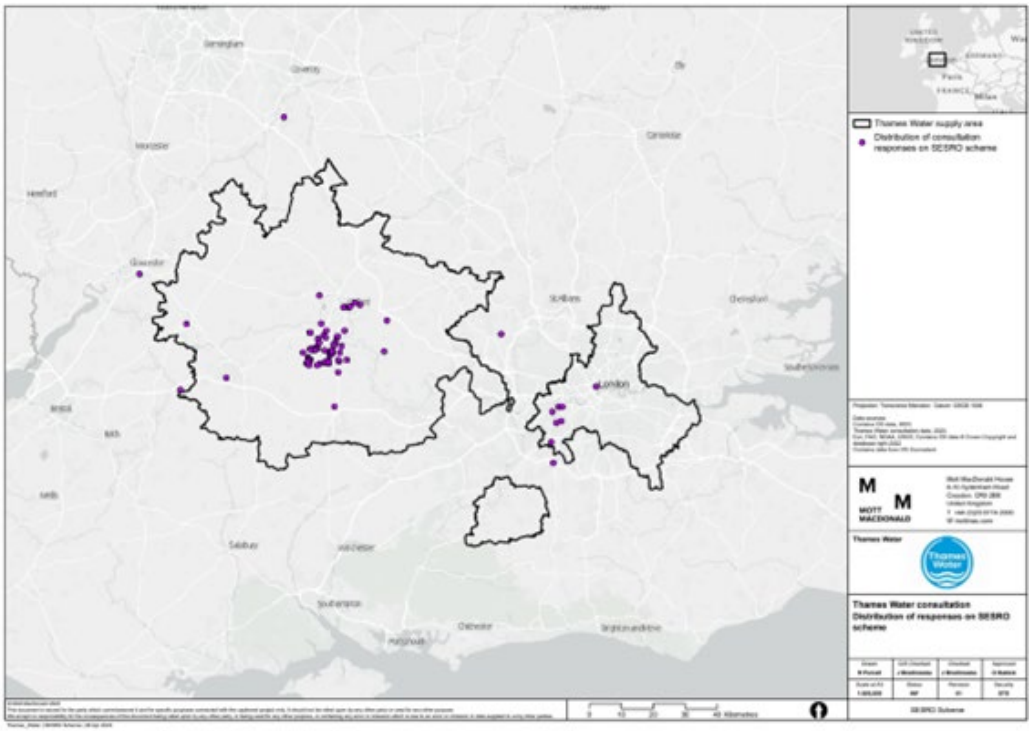


Figure 3-5: Distribution of representations in relation to SESRO

Source: Mott MacDonald

3.230 The MPs for Wantage, and Oxford West and Abingdon, raised concerns about the proposal on behalf of his constituents.

3.231 Representations were also received from individuals who were supportive of the proposed reservoir who provided a range of points including that investment in new water resources

was needed; the reservoir would be more resilient than other potential sources; and the reservoir could provide a wide range of environmental and social benefits locally and regionally.

Customer research

3.232 Customers were introduced to the plans for the reservoir to be built in the Upper Thames catchment, in Oxfordshire. The information included details of the location; the size, using recognisable frames of reference; the visual representation; what would be involved in the development of the scheme; the benefits of the proposal and the concerns raised by some of the local community.

3.233 Customers' feedback was that the reservoir was considered to be the best solution of the water supply options discussed. It was considered a natural solution that could benefit the environment, as well as provide a reliable water supply in the future, plus it would be an asset to the local area.

3.234 There were minor concerns about the impact building the reservoir will have on the local community and the environment however the concerns raised by the local community were not considered strong enough to prevent the build. Customers considered that the benefits of securing a reliable water supply for the Thames Water catchment outweigh the concerns of those who live near the proposed site.

3.235 Customers were on the whole disappointed that the proposal was for the smaller size as building a larger reservoir was thought to better protect the area from running out of water in the future. With no obvious downside, bar the immediate disruption of the build, it was felt that having a larger reservoir seemed like the best approach to ensure a secure water supply for the future without the need for further investment.

3.236 The sentiment by age group in relation to the proposed reservoir, using AI analysis, is shown in Figure 3-6 and shows the majority of participants in the research study expressed support for the reservoir.

Figure 3-6: AI recorded sentiment in relation to SESRO by age group

Note: 0 being the most negative and 5 being the most positive.

Source: Verve, May 2023

Our consideration

3.237 Our water resources are under pressure and we need to plan ahead to ensure we can continue to provide a secure water supply whilst protecting the environment.

3.238 We have considered a wide range of options including tackling leakage, making the best use of our water resources and catchment schemes alongside developing new sources of water including national and regional water transfers, desalination, water recycling and reservoirs. We have assessed the costs and benefits of different solutions to the challenge that we face and we have used decision support tools, alongside other factors, in order to formulate a best value adaptive plan. This has all been developed working together with other water companies in the south east and with close involvement of the regulators.

3.239 With the scale of the water resources shortfall we will need a combination of demand reduction as well as new water sources. Working with WRSE, the detailed technical assessments and modelling have shown that SESRO is an integral part of the best value adaptive plan for the South East selected for delivery by 2040. Contrary to the suggestions made by some respondents, this did not, and does not, mean that the selection of SESRO is fixed in the modelling, or that in some way the choice of the proposal has been pre-determined by WRSE and our member companies. The SESRO reservoir proposal is consistently selected in investment model runs undertaken for the regional plan as a necessary scheme to meet the future water resources challenges that the region is facing. In undertaking the modelling, all other alternative options were available for selection however they were not selected ahead of, or instead of, the SESRO reservoir proposal.

3.240 The best value plan investment modelling confirmed that plans with the SESRO reservoir proposal as a core scheme are cheaper and achieve better overall best value metric scores.

3.241 In the draft regional plan the 100 Mm^3 and 150 Mm^3 size SESRO reservoir proposals were extremely close in the best value metric assessment, but the 100 Mm^3 reservoir was assessed to be slightly better value, although noting the decision was finely balanced. For the revised draft regional plan, we consider that the plan with the 150 Mm^3 SESRO reservoir proposal represents a better value solution , compared to the smaller sized reservoirs. Given the wide range of future risks which exist, the 150 Mm^3 option is considered to provide security for the region's supplies for the future and the ideal base of an adaptive plan for an uncertain future.

3.242 Through the modelling work we have shown that the larger SESRO reservoir proposal is able to support more water resource zones through a critical extreme dry year and could support the implementation of sustainability reductions quicker than the smaller size reservoir options. This would allow companies to accelerate reductions and protect vital habitats across the South East in a more flexible way. It is also provides greater resilience capability to the operational loss of an existing raw water storage reservoir for planned or unplanned maintenance.

3.243 SESRO would be developed by three water companies - Affinity Water, Southern Water and Thames Water – and it would provide water to the customers of these water companies as well as resilience across the South East.

3.244 In summary, WRSE has determined that the best value plan includes SESRO at 150 Mm^3 as it produces better average best value plan metric scores, and is more resilient to dealing with known potential future risks. It will also provide greater resilience support to the risk of an elongated outage of an existing London storage reservoir, ensuring water can still be delivered to our customers.

3.245 Sensitivity analysis was completed i.e. excluding schemes and changing dates of schemes including the exclusion of all reservoir options and deferring the availability of the reservoir beyond the date when new supplies are needed in the west of the catchment. This conclusions from this sensitivity analysis provided robust data that the reservoir is an important part of a best value plan for a long-term resilient water supply.

3.246 We have listened to issues and concerns raised by the local community. We have shared the information that is currently available in an open and transparent way, and set out the further work that is planned. In February 2023 we published a statement of community commitments to respond to some of the common issues raised in the local community, this is in Annex 4, and in the following sections we answer some of the most common concerns raised in representations to the consultation.

- Carbon - Water companies have committed to reaching net zero operational carbon emissions by 2030 and carbon is an important factor in the development of the WRMP. For all new infrastructure we would look to use existing low carbon technologies and look at how emerging technologies and innovation could reduce the carbon budget on the project.
- Environmental impacts - the environmental impacts of the proposed reservoir, and indeed of all options considered in the WRMP, have been assessed and presented in both the Strategic Environmental Assessment that accompanies the WRMP and also within our regulatory submission to RAPID (Gate 2 report, section 6). This strategic

level appraisal of impacts has been taken into account when deriving the best value plan. Furthermore, future promotion of the reservoir would be subject to a formal Environmental Impact Assessment (EIA) this would be consulted on extensively and scrutinised by statutory bodies including Natural England, Historic England and the Environment Agency, as well as the county highways, county ecologist and archaeologist teams. We consider that SESRO has the opportunity to provide local and regional benefits including high levels of biodiversity net gain and natural capital benefit to the local and regional area around the site.

- Local flooding - The reservoir would be built on some of the existing floodplain associated with tributaries of the River Ock and therefore in line with prevailing legislation and best practice, this would be mitigated through the development of floodplain compensation to leave flood risk at a lower level than if the project hadn't taken place. All such work would need to be reviewed and agreed by the EA before consent for the scheme is allowed. Our initial findings are that the scheme could result in a slight betterment to the flood flows passing downstream to Abingdon and negligible impacts on groundwater flooding. This will be subject to further modelling, appraisal and scrutiny as the design progresses.
- Groundwater flood risks - We have undertaken modelling and assessment of the groundwater flood risks which indicates that when the planned project's drainage measures are simulated in the model, groundwater levels are reduced by the presence of the proposed toe drain, flood storage area and watercourse diversions and through the inclusion of the proposed groundwater drain around the embankment.
- Landscape - We would work with the country's leading environmental specialists to design the reservoir to enhance both the landscape and environment by providing new aquatic and terrestrial habitats that encourage greater biodiversity and move away from the predominantly monocultural arable farmland that presently characterises the area. We would also explore the potential for developing carbon capturing wetlands.
- Water quality - We have undertaken water quality risk assessment and analysis which takes account of the actual recorded water quality within the River Thames and confirms the feasibility from a water quality risk perspective. This risk assessment has been reviewed by the Drinking Water Inspectorate.
- Access and recreation - We have developed an Indicative Master Plan for the largest reservoir size to provide an initial view of how the engineering requirements of the scheme could be integrated with the environmental mitigation and recreational uses of the site. This plan will be refined, if SESRO is progressed, through future consultation, environmental assessment and design iterations. The reservoir has the potential to offer a wide range of opportunities including creating a place that people would want to visit for their health and wellbeing, new accessible leisure and recreational facilities from walking, cycling, fishing, birdwatching and a wide range of water sports for all as well as providing opportunities to host sporting events with access to new facilities for local people. If the reservoir is taken forwards, we would work with stakeholders and the local community to deliver the best project for the local area and wider Oxfordshire.
- Safety - Thames Water, and the UK water industry has an excellent record of reservoir safety. The design would meet the requirements of the Reservoirs Act 1975, be reviewed by an independent Reservoir Advisory Panel, and adopt appropriate security measures.
- Confidence in the build of the reservoir - We currently operate several comparable reservoirs - King George VI, Queen Elizabeth II, Queen Mary, Queen Mother and Wraysbury which all have dam heights of 12-20m and crest lengths of 4.3km to 6.3km. At between 15m and 25m high, the earth embankments are well within the parameters

of other similar schemes in the UK. The British Research Establishment (BRE) Register of UK Dams lists 370 embankments with a height of at least 15m and 105 are over 25m. Most embankment dams in the UK are built as impounding reservoirs (i.e., impounding a watercourse, and therefore abutting either valley side). However, the length of the dam has no bearing on the maximum stresses within it, which equate to the height, as this defines the scale of the loading induced by the self-weight and the loads applied by the water. A longer dam is typically more likely to encounter variety in the ground conditions which are to support the dam, but the ground conditions at the SESRO site have been found to be highly consistent around the perimeter. In an international context the proposals for SESRO constitute a large reservoir but there are many which are larger. Far from being untested, the use of earth embankments of such scale to impound reservoirs is very well established.

3.247 We understand that local communities and local people who live close to the reservoir have concerns and we are committed to work openly with the local communities. We have appointed a dedicated engagement manager to ensure there is a point of contact for the local community and residents and will continue to proactively engage with local politicians, councillors, council officers, parish councils and local communities.

Changes to our draft plan

3.248 The revised draft South East plan and our revised draft WRMP24 include a 150 Mm^3 reservoir to be available from 2040 onwards, and continues to be shared with Affinity Water and Southern Water. The 150 Mm^3 reservoir is able to provide 271Ml/d for up to 18 months, provides resilience to future challenges and has been determined to provide the best value solution for our customers and the wider South East. Further detail on the decision making and our overall plan is provided in Sections 10 and 11 of our revised draft WRMP24.

Severn Thames Transfer

Introduction

3.249 The Severn Thames Transfer (STT) is a water transfer from the River Severn to the South East for use during a drought. The scheme could supply water for Affinity Water, Southern Water, South East Water and Thames Water customers.

3.250 The water would come from the River Severn itself and additional sources of water could be developed and provided by Severn Trent Water and United Utilities to supplement the water resource when there is not enough water available in the river.

3.251 The water would be treated prior to transfer to the River Thames catchment to mitigate potential impacts on water quality and the movement of invasive species between the river catchments.

3.252 The water would then be transferred from the River Severn to the River Thames. There are two main options to transfer the water:

- A new pipeline of around 88 km from Gloucestershire to Oxfordshire
- A new pipeline of around 58 km supported by restoration of sections of the Cotswold Canals of around 29 km

3.253 The conclusion of the option appraisal of the transfer routes is that a direct pipeline is the preferred option based on the cost and best value assessments, but this is subject to future consultation if the scheme is taken forwards.

3.254 The scheme has a potential transfer capacity of 500 Ml/d. This was included in the draft South East regional plan and our draft WRMP24 from 2050s, with additional water resources developed in a phased manner from the 2050s. This was also included in draft Water Resources West regional plan.

3.255 An overview of the scheme is presented in Figure 3-7.

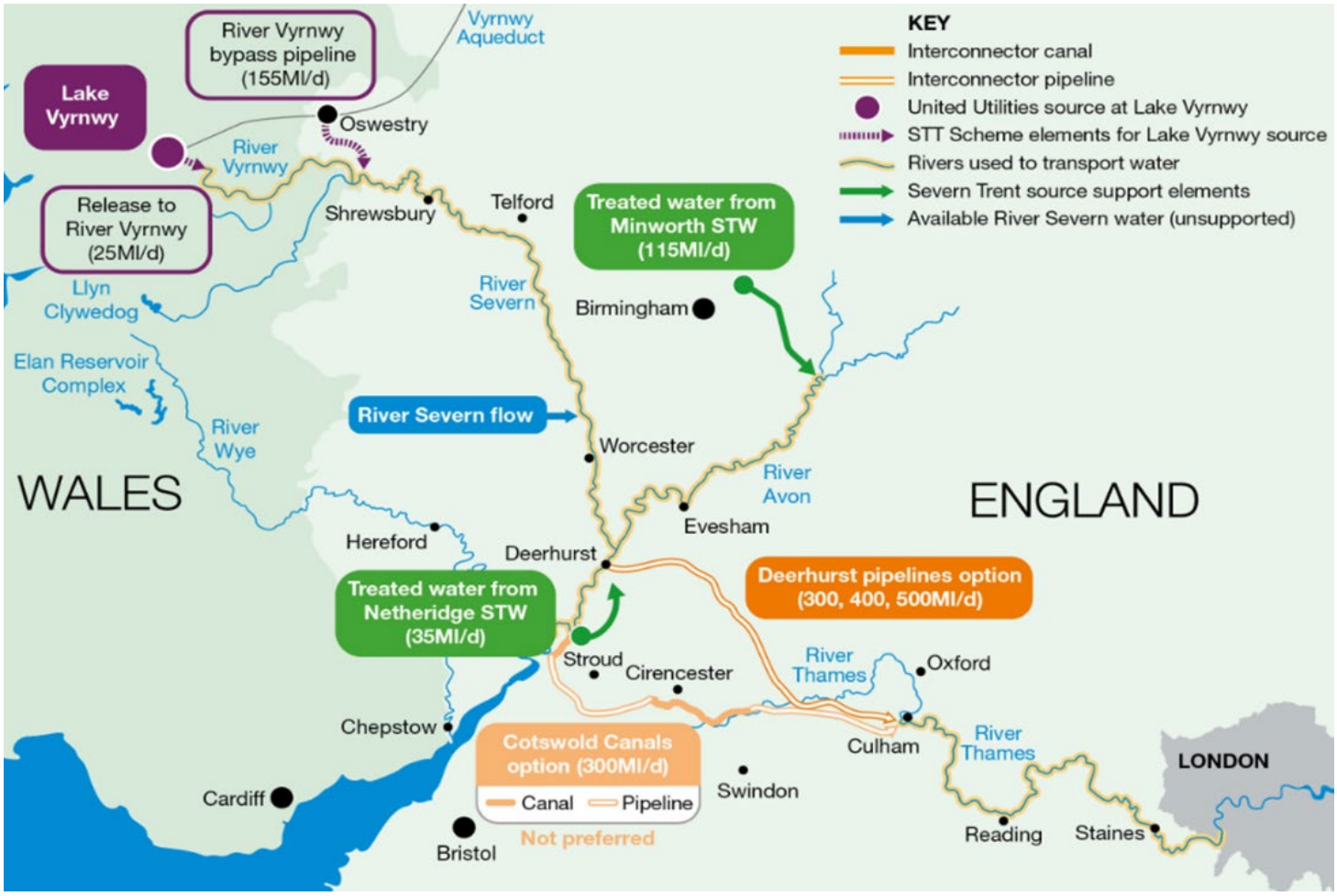


Figure 3-7: Severn Thames Transfer system overview

3.256 If the scheme is taken forwards a range of planning; land and environmental related consents would be required including abstraction licences, discharge licences and an operating agreement with the relevant environmental regulators and the consent would be advanced through Planning Act 2008 legislation, requiring a Development Consent Order.

3.257 Information on the approach to identify and assess new water supply options is presented in Section 7 of our revised draft WRMP24. Information on the studies completed to date to assess the feasibility of the Severn Thames Transfer and develop the conceptual design of the scheme is reported in the regulatory submissions to RAPID[27].

Consultee representations

Regulators

3.258 The EA noted that the transfer relies on enough water of suitable quality in the River Severn to be transferred to the River Thames and based on the work to date the EA stated that it is not convinced this is a viable solution with concerns about its resilience and environmental

[27] STT Gate 1 and Gate 2 reports www.thameswater.co.uk/sro

impact, particularly in a changing climate. The EA specifically referenced the summer of 2022 when levels in the River Severn reached very low levels and whilst the scheme includes support schemes, these may be required by the donor companies for their own drought resilience to ensure their own customers are not put at a higher drought risk due to the transfer of water. The EA advised that given that the River Severn to Thames Transfer has not yet been shown to be feasible or environmentally acceptable, studies should continue but alternative options should also be progressed.

3.259 NRW raised concern that the scheme could affect the environment within Wales. NRW requested further work to improve the understanding of the water availability, environmental impacts and wider implications of options on the River Severn and the Severn Estuary. NRW specifically raised concerns in respect of compliance with the Habitats Regulations Assessment (HRA), the Water Framework Directive and Welsh legislation.

3.260 NRW requested continued engagement with NRW, the EA and NE along with other stakeholders with an interest in the scheme, as well as fuller engagement with Welsh stakeholders especially in regard to potential impact on the environment, society, and economy of Wales. NRW cited the need to meet the Environment (Wales) Act and the Wellbeing of Future Generations Act legislative requirements. Ofwat also raised the need for all plans representing STT to adhere to Welsh legislation and for the plan makers to engage Welsh stakeholders and customers.

3.261 Ofwat advised that further detail should be included in the revised draft plan on the engagement and support for third parties to develop options and how best value assessments have resulted in the decisions made on third party options. The STT was specifically mentioned in this context and Ofwat asked that additional information, that has been set out in submissions for RAPID's gate two reports, on best value decisions on the pipeline and canal routing sub-options, is presented in the revised draft plan.

3.262 Both EA and Ofwat noted some discrepancies between company and regional plans on the representation of STT and asked that information is presented consistently across plans.

3.263 Natural England highlighted that there is no mention of the impact on SSSIs or protected habitats and species and requested this information. Furthermore no mitigation measures have been included for STT or next steps, including monitoring to inform assessments.

Stakeholders – organisations

3.264 There were a large number of responses received from stakeholder organisations in relation to STT. The main points raised in relation to the scheme and our consideration of the points made are summarised below, with more detailed information presented in Appendix J.

3.265 The majority of the representations set out their support for a transfer of water from the River Severn to the River Thames using a fully, or partially, restored Cotswold Canals as a conduit for the water rather than a new pipeline. The representations highlighted that a wide range of benefits could be accrued from the restoration of the Cotswold Canals network including environmental, economic and social benefits and the opportunity to develop a more integrated canal network connecting with other existing canals. Many of the representations included similar points:

- How cost; energy and carbon; and wider environmental, economic and social benefits have been taken into account in the route options appraisal methodology

- How representations from supporters of the Cotswold Canals have been taken into account in the evaluation of options
- How the capacity of the water transfer was determined with respondents suggesting that a 300Ml/d water transfer would be adequate and that 500Ml/d of water to be transferred would not be available from the River Severn
- The benefit that could be gained from the work already completed on the canal; the use of new technology and lessons learnt from recent canals constructed; experience of working with land owners and local agencies in partnership to build the canal network and support from local volunteers and other organisations, for example Network Rail and National Highways.
- Opportunities to provide extra water resource resilience with respondents highlighting that by restoring the Cotswold Canals network there were potential opportunities for additional water resilience such as the old gravel workings in Latton and the Cotswold water park to provide additional water storage and back up reservoirs
- The lesser impact on the countryside; the requirement for fewer consents; and less controversial and therefore opposition, than a pipeline

3.266 A number of respondents set out their general support for STT on the basis that it should be prioritised over SESRO, and be delivered ahead of other options. The reasons given included: safety, proven technology, limited impact on the environment, lower carbon, quicker, cheaper, easy to build, flexibility to address future water needs and resilience to droughts by providing water from different catchments and sources and supports the creation of a national water grid.

3.267 Several responses suggested that the benefits to Wales needed to be fully and properly assessed. It was also suggested that the UK and Welsh Governments should put in place the necessary legislative frameworks to raise a levy on water supply companies on transferring water outside of Wales.

3.268 Water Resources West highlighted the flexible, adaptive nature of the STT system and stated that a transfer option which uses Vyrnwy reservoir refilled from a catchment nearly will always have lower drought risk than a reservoir refilled from the same catchment. They ask that Thames Water present a clear and consistent preferred plan section selection for transfer schemes, aligned to the outcome of the third reconciliation.

Stakeholders – individuals

3.269 The representations received from individuals in support of the STT were from supporters of the restoration of the Cotswold canals who set out their preference for the use of the restored canal network to transfer the water from the Severn catchment to the Thames catchment rather than a pipeline and opponents to SESRO who argue that STT should be taken forwards as an alternative to the reservoir in Oxfordshire.

3.270 The respondents who supported the restoration of the canal as part of the STT scheme cited the environmental, social and cultural opportunities that could be delivered and the need to take these factors fully into account in the assessments of the conveyance options. They also stated that in their view this was also the most cost effective approach.

3.271 There were some representations from individuals who did not support regional water transfers, and specifically from the River Severn, stating that transfers are unlikely to be resilient in the face of a changing climate, as well as raising environmental and ecological

concerns about the construction of a long pipeline in particular one that would need to cross an AONB.

Customer research

3.272 Customers were shown information on the STT including a description of the scheme, an overview of how the scheme would operate and the key issues under consideration, as well as points raised by stakeholders and the local community.

3.273 Of the three strategic water resource schemes, the transfer had the least customer support. Customers felt the scheme was ambitious and there were concerns that Thames Water would not be able to deliver this. The reliability of the scheme was also questioned noting that it relies on other water catchments and suppliers, and concerns were raised as to whether it could cause potential water shortages elsewhere.

3.274 There were concerns about the disruption and impact on the areas the pipeline will travel through. There were also significant environmental concerns that transferring water would impact negatively on wildlife. To gain support, there would need to be assurances it is feasible and will work, rather than something that could end up costing money but not delivering.

3.275 The AI analysis showed that this scheme received the least positive feedback as shown in Figure 3-8.

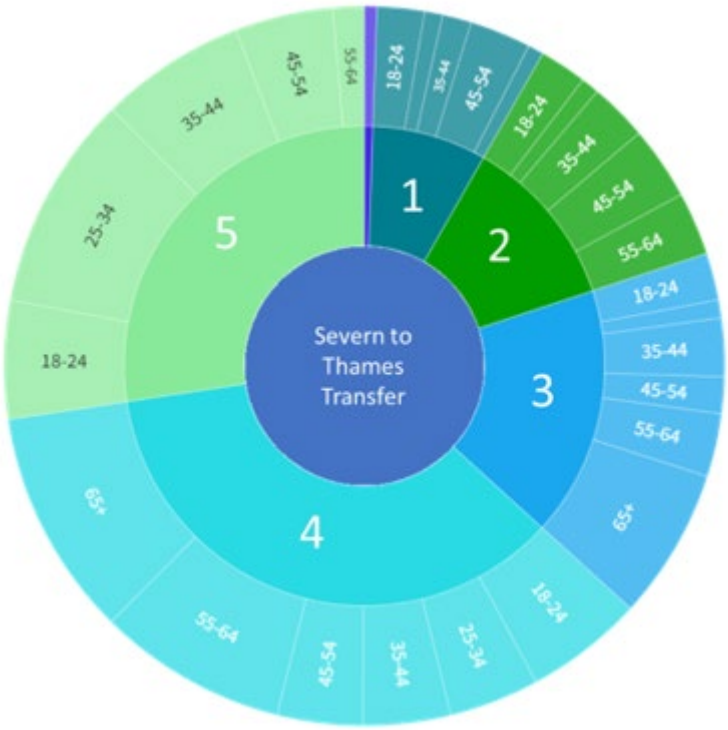


Figure 3-8: AI recorded sentiment in relation to the Severn Thames Transfer by age group

Note: 0 being the most negative and 5 being the most positive.

Source: Verve

Our consideration

3.276 We note the representations submitted by the regulators which clearly state the need for further studies and assessments on the scheme, particularly in regard to resilience and environmental impacts, and to ensure the scheme is compliant with all the required legislation. We are committed to work openly and transparently and will continue to work with regulators and stakeholders to set the scope and undertake these assessments as part of the RAPID regulatory gated process for SROs.

3.277 We are also committed to engage with Welsh stakeholders to explain the scheme, listen to issues and concerns and ensure these are fully addressed. We will also ensure all the assessments are completed to comply with Welsh policy and legislative requirements. We have a joined-up Welsh engagement plan with WRW core member companies, including Severn Trent and United Utilities. We have started to implement this plan, with briefings to Powys Council, Wales environmental NGOs, river and wildlife groups, amongst others. A key concern raised by some Welsh stakeholders is that additional water would be transferred from Wales as part of this scheme, this is not the case. There are no plans to take any additional water from Wales to England. The STT would use water that currently goes to North West England from Lake Vyrnwy and this would be diverted at times to the South East via a transfer from the River Severn to the River Thames.

3.278 In respect to ensuring the Wellbeing for Wales we would work with stakeholders across Wales to determine what benefits could be achieved in Wales, including Powys. Specifically

in respect to a levy for water transfers from Wales this would be a matter for the UK and Welsh government.

3.279 In respect of the transfer route, we recognise there is wide support from organisations and individuals who are committed to, and support, the restoration of the Cotswold Canals and for the restoration of part of the canal to be incorporated into the scheme. We have completed an options appraisal study[28] to assess a wide range of potential options to transfer the water from the River Severn catchment to the River Thames. We engaged with the Cotswold Canals Trust (CCT) and other stakeholders on the approach taken for the options appraisal and we also took account of data and information that was provided by CCT. The assessment concluded that a direct pipeline is the preferred best value option. A combination of a pipeline and restored canal transfer option is more costly, has a greater carbon and environmental impact, and is more complex to procure, construct and operate. The study also showed that the best way to fully and effectively deliver both a water transfer and a navigable canal would be to deliver them separately. This is presented in the SRO Gate 2 report. However, before any final decisions are made and as part of any future phases of the scheme development, we will consult on the pipeline and route corridor options. We will continue to engage with supporters of the Cotswold Canals and present our findings for scrutiny and discussion.

3.280 A point that was raised in several representations concerned the extent of construction and operational effects on the countryside and landscape, including national designations (National Parks/Areas of Outstanding Natural Beauty). This was considered in the options appraisal study. For both pipeline and canal options there will be a necessity for significant construction activity within the open countryside and the AONB, including the laying of pipes and the creation of embankments for canal pounds. The construction area required for the canal pounds is likely to be larger than for pipeline elements due to the additional width of the canal pounds compared to enclosed pipelines and by their very nature, the canal elements result in a larger permanent above ground asset compared to the pipeline elements. Both of these characteristics result in a bigger landscape impact.

3.281 Many representations suggested that the restoration of the canals as part of the conveyance route would be supported, that may be the case amongst supporters of the Cotswold Canals however there is no evidence to agree with the view that an option including canal pounds would be less controversial than a pipeline. A large water transfer option including canal pounds will have similar consenting requirements to a direct pipeline option, including a Development Consent Order as required under the Planning Act 2008.

3.282 We also acknowledge that organisations and individuals opposed to SESRO consider the transfer to be a better alternative option and should be progressed ahead of SESRO. WRSE has undertaken detailed modelling and sensitivity analysis in developing the best value regional plan to confirm the timing of water resource options to meet regional demand. This work has concluded that STT would not be a preferred option within the 'reported pathway'. Programmes which include STT instead of SESRO are more expensive, result in more

[28] https://www.thameswater.co.uk/media-library/home/about-us/regulation/regional-water-resources/water-transfer-from-the-river-severn-to-the-river-thames/gate-2-reports/STT-G2-S3-302-Interconnector-Options-Appraisal-Summary-Report.pdf

carbon emissions and perform less well when considering other best value criteria, such as environmental and resilience metrics. This information is presented in the revised draft SE regional plan and Thames Water has presented the information relevant to its supply area in Section 10 of the revised draft WRMP24. This sequence of options is also supported by our customers.

Changes to our draft plan

3.283 Since the publication of the draft South East regional plan and our draft WRMP the regional water resources groups have revised their modelling work. This modelling output reflected updated water resource option data as well as other relevant information such as the updated government requirements for all water companies to meet a 110 l/h/d water use target. This work showed that the transfer is not selected in the reported regional pathway for WRSE or WRW. Whilst the transfer is no longer included in the preferred regional plans, sensitivity analysis shows that the transfer remains the principal alternative option to SESRO. We are therefore proposing to continue development of the scheme in our revised draft WRMP24 to ensure we have a reserve option if this is needed and our plan is robust and able to adapt to meet our statutory duties in the future.

Best value planning and decision-making

Introduction

3.284 We worked in conjunction with the other water companies across the South East, through WRSE, to develop the best value planning approach and to carry out the modelling and decision-making that underpins the South East regional plan and our WRMP24.

3.285 Thames Water's programme appraisal and best value plan is fully aligned with the WRSE regional plan for water resources, we have taken a lens from the WRSE programme appropriate to our supply area.

3.286 The Water Resources Planning Guideline sets out that the proposed approach to programme appraisal should be risk based. We carried out a problem characterisation that examined the severity and complexity of the planning challenges. It was apparent that the planning challenge in the South East was significant and complex and that advanced approaches to programme appraisal were required.

3.287 Our Best Value Planning approach, developed and applied alongside WRSE, provides solutions (programmes of options) across a range of potential futures. These futures are a combination of growth (population and property), climate change and environmental destination scenarios.

3.288 We identified objectives, criteria and metrics to assess programme performance, which are a balance of cost, environment and resilience factors as presented in Section 10 of our draft WRMP24.

3.289 A mixture of quantified and non-quantitative metrics are modelled with alternative plans developed before selecting an overall Best Value Plan (BVP). The BVP is informed by Strategic Environmental Assessment, Habitats Regulations Assessment and Water Framework Directive (WFD) Assessment, as well as scrutiny from a cross-sector panel.

Consultee representations

Regulators

3.290 Ofwat recognised the regional BVP approach and how Thames Water had translated the WRSE Regional Plan for water resources into the WRMP. However, it recommended additional explanation and evidence for decisions made. It also wanted the assessment presented in a consistent way with its Long-term Delivery Strategies (LTDS) approach, which it is using to assess the Periodic Review of Business Plans.

3.291 The EA recommended that we justify that the preferred plan is best value, clarifying the decision-making used, especially when the schemes the company proposes carry substantial risk. It stated that it expected the best value plan to include detail on the options, justification for selection of the options, sensitivity testing, and environmental assessment, and considered that this could be further improved.

3.292 All regulators pointed out the increase in investment required and thus increases in bills that would result in order to meet the WRMP objectives.

Stakeholders - organisations

3.293 The responses from stakeholders were primarily focussed on the solutions proposed in the best value plan (BVP) and consideration of them, rather than the objectives of the BVP and the process by which the preferred programme was identified.

3.294 There was good support for demand management being prioritised in the first instance, with a strong expectation that Thames Water should hit targets and look to exceed them, doing more, and more quickly.

3.295 Most stakeholders recognised the twin-track approach and the need for resource development alongside demand management. However, there was little consensus regarding which options should be delivered, with views on individual options often polarised.

3.296 The responses from local authorities, parliamentary constituencies, district and parish councils focussed on the solutions proposed that are relevant to their area. Those close to the Teddington DRA and SESRO were particularly vocal in their concerns regarding the options and how their inclusion appeared to be at odds with best value for the people they represent or the environment.

3.297 Some local authority and other responses, including those in opposition to SESRO, suggested that WRSE should re-evaluate its best value criteria to better consider the environmental impact and carbon emissions associated with the projects in the plan, and/or to promote a least risk and least environmentally damaging plan. This also linked back to their concerns about the relative lack of priority being given to the climate emergency and carbon emissions associated with large supply schemes.

3.298 The Group Against Reservoir Development considered that the BVP approach was flawed, primarily because of overstatement of the need, but also suggesting that the BVP metrics are underdeveloped and contradictory. They have provided extensive commentary on alternative assessments of need and proposed solutions to meet them that do not involve SESRO.

3.299 A number of the environmental NGOs and the Rivers Trusts' responded positively regarding the inclusion of a significant programme of abstraction reduction via the environmental destination programme and called for the inclusion of nature-based solutions for wider environmental benefit. In general, they were positive on the need for resource development in order to facilitate the environmental programme and the benefits of storage to regulate flow.

3.300 CCW did not raise concerns with the best value planning approach itself but sought clarification on the adaptive planning framework and the consideration of uncertainty when explaining the best value plan.

Stakeholders - individuals

3.301 There were several supportive comments on the best value approach and adaptive planning recognising the need to plan ahead to safeguard future water supply.

3.302 Representations which were negative in relation to the draft plan overall tended to be as a result of opposition on one or more of the schemes included in the draft WRMP24, with a view that Thames Water should do more to manage available resources effectively and

tackle leakage ahead of investment in new resources. Furthermore, there was an underlying mistrust of Thames Water with references to river health and overflows from sewage treatment works; the priority placed on shareholders over local communities and customers, with an objective to generate increasing value for shareholders; and general poor performance with Thames Water's leakage record cited in representations.

Customer research

3.303 There was support for the draft plan overall and belief that Thames Water is working in the best interest of customers. The majority of whom agree that it is important to act while there is time to make a difference.

3.304 However, some customers did raise concerns about the cost of the proposals to bill payers, and participants questioned if all three strategic schemes were needed, or if the abstraction at Teddington and reservoir would be adequate.

3.305 There are concerns about the time it will take to implement the plans and that no immediate action is being taken. This creates worries that money will be spent on interventions but they will come too late to make any meaningful difference. There are also some thoughts that opposition from local groups, and the need for permissions, will delay things further, and that no plans will ultimately be realised to create new sources of water.

New information

3.306 Between the draft and revised draft there have been a number of changes to information feeding into the programme appraisal. These include changes to the baseline assessment of need and ongoing development of options to meet that need as part of options appraisal and the SRO gated development.

3.307 There have also been new policy announcements from Government that have introduced or confirmed expectations, particularly with respect to future household and non-household demand and leakage reduction.

Our consideration

3.308 We consider that although there is disagreement about the options that are selected in the best value plan, the process developed to produce it is fit for purpose and commensurate with the level of risk in the South East region.

3.309 There is relatively little dissent with the metrics we are using to produce the preferred plan and alternatives, rather how they have been considered in identifying and justifying a best value plan.

3.310 We accept that there is a degree of subjectivity in how to balance cost, environment and resilience factors and that different stakeholders may weight them differently.

3.311 We need to link sensitivity testing more specifically to the narrative to justify decisions made and have clearer explanations for the additional benefits of the best value plan when moving beyond a least cost solution.

3.312 We also need to do more to explain the adaptive nature of the plan and how it will be monitored.

Changes to our draft plan

3.313 Given the changes to the information feeding the programme appraisal, we have re-written Section 10 and 11 of the revised draft WRMP24 to take account of the latest modelling and decision-making.

3.314 We have not changed the best value planning process. It remains consistent with the WRSE and include outputs based on regional-level analysis.

3.315 We have undertaken a wider range of sensitivity tests to ensure we have fully tested the plan and are confident it is robust to future uncertainties.

Adaptive planning and the monitoring plan

Introduction

3.316 WRMPs are long-term plans that require us to forecast the future. The further ahead we look the more uncertain the future is. We counter this uncertainty by using an adaptive planning approach that considers a wide range of potential futures and seeks solutions that are robust to those futures.

3.317 The WRMP process already allows for regular review via statutory reporting, but we can also take advantage of advances in computing to optimise and test wide ranges of futures and solutions at once, using different lenses (such as resilience and environment), trading off the solutions to identify better value than a solution based purely on cost.

3.318 The draft WRMP set out nine alternative pathways across the range of potential futures, as described by differing scenarios of population and property, climate change and environmental destination and including key policy dates, such as delivery of 1:500 drought resilience by 2039.

3.319 In the past these pathways would be modelled individually and a preferred selected. Now we model them all at once and the solution is optimised so that it can be adaptive across the range of futures.

3.320 The regulatory guideline that water companies must follow requires a single, preferred pathway to be identified, which is referred to as the reported pathway, which we then track against using a monitoring plan.

3.321 This reported pathway presented in our draft WRMP24 complied with the Water Resources Planning Guideline and was determined to be the best value way of meeting the regulatory and policy guidance, to:

- Meet population growth in-line with the local authority housing plans
- Achieve the level of environmental improvement required by regulators
- Plan for a high climate change scenario
- Achieve one in 500 year drought resilience by 2040

3.322 Over the planning period, two regionally significant decision points were identified, which could trigger a change of pathway. The first decision point is associated with the level of population growth and the second with climate change and the level of abstraction reduction needed to improve the environment.

3.323 We have presented the nine pathways in the adaptive plan in Figure 3-9. The reported pathway is pathway 4 (which is shown in light green).

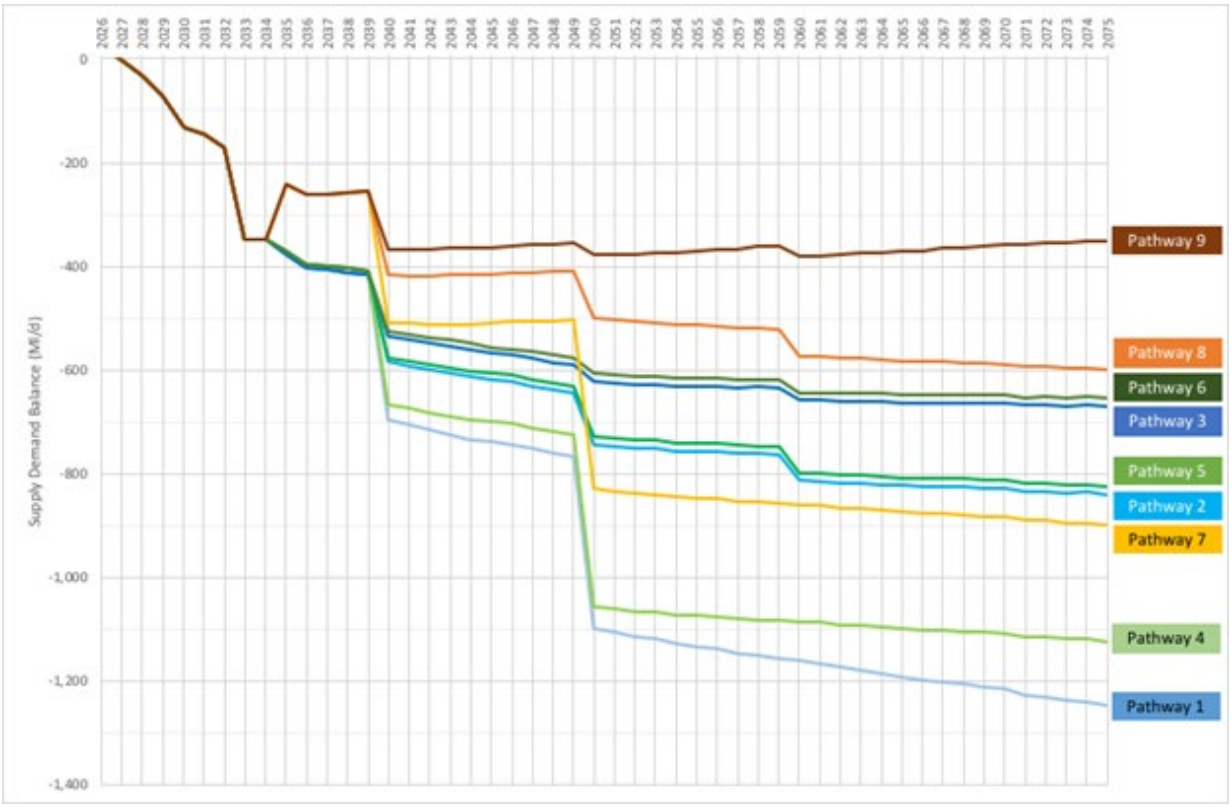


Figure 3-9: Future forecast supply demand balances by pathway (DYAA)

Source: Thames Water

3.324 To read more about the adaptive planning approach go to Section 10 of our revised draft WRMP24.

Consultee representations

Regulators

3.325 The Water Resources Planning Guidance supports the use of adaptive planning approaches. All the regulators welcomed the steps taken by Water Resources in the South East, and its constituent companies, to produce an adaptive plan.

3.326 Ofwat required a wider set of sensitivity tests, particularly relating to the branching points in the nine pathways, and clearer linking of those tests to the best value plan. They confirmed that they expected to set Thames Water a 'core' investment programme and then to justify investment beyond this level through sensitivity testing. They raised concerns about scenario testing of implausibly extreme scenarios and thus unlikely programmes.

3.327 The EA raised particular concerns about managing risk in the first 5-10 years of the programme, due to the potential for step changes in baseline performance and the risk of underperformance/over-estimation of the demand management heavy programmes in these years.

3.328 The EA and Ofwat required improvements to the monitoring plan with clear triggers as to when it would need to move to an alternative pathway, so that it can clearly understand how

Thames Water would respond to these challenges and can demonstrate that it would be prepared with suitable alternatives.

Stakeholders

3.329 Stakeholders were generally supportive of an adaptive approach, seeing it as a positive step to managing future uncertainty and as a good way to articulate the challenges and solutions.

3.330 There were differences of opinion as to when branch points should be and based on which drivers. Compared to the WRSE Emerging plan, branch points had been brought forward for the draft, which was welcomed, but for some the branching remained too far into the future.

3.331 CCW raised the potential confusion between decision points and branching points in the adaptive framework, noting that the first 10 years of the plan followed one branch, but that there was a decision point in 2030.

3.332 Those stakeholders most impacted by the strategic regional options were most active in challenging the scale of need and explaining benefits of alternative solutions.

3.333 Oxfordshire County Council considered that all the adaptive pathways should include lower figures and the selected pathway in the plan should be for close to the lower end of the current estimates at 1 billion extra litres per day by the end of the plan period.

3.334 The Group Against Reservoir Development stated that in its opinion that future water needs in the South East had been grossly over-estimated and that the magnitude of over-estimation undermines the credibility of the regional and thus Thames Water's draft WRMP. In the areas that might be supplied by the SESRO proposal, including Affinity Water's Central Region and Southern Water's Hampshire zone, the Group Against Reservoir Development calculated that the needs in 2050 have been over-estimated by nearly 900 Ml/d, and provided detailed comments challenging the need for new water supplies.

3.335 Few stakeholders made comments directly about our monitoring plan. The Greater London Authority had similar views to our regulators, commenting that they felt we should improve the quality of the monitoring plan.

Customer research

3.336 Overall customers considered that the WRMP offers an acceptable solution and they agree a plan is needed to ensure a reliable water supply in the future.

3.337 Some aspects of the draft plan are not thought to go far enough, particularly with the targets around leakage, and some considered that Thames Water should do more to educate customers to save water.

3.338 There is concern regarding bill increases, with the cost of living crisis, and that the cost of investment should be shared by other parties, and there is concern that Thames Water is not acting quickly enough to develop new water sources and work should already be underway.

Our consideration

3.339 We consider that regulators, stakeholders and customers are in favour of an adaptive planning framework and understand its benefits. We consider that our approach to adaptive best value planning is broadly supported, but that more information is required to explain how the best value plan will be monitored and how alternative pathways may need to be followed.

3.340 Stakeholders are aware of uncertainties and risks in forecasting and challenges posed by large programmes of demand management or in delivering large resource development options. This drives the desire to examine a wide range of alternative future and to develop a wide range of alternative programmes.

3.341 We consider that a twin track approach is supported and is required, but that demand management should be prioritised in the near term.

3.342 We agree that the monitoring plan should be enhanced recognising the risks and so we can be clear about the decisions that would be required and how they are taken. It is difficult to link these to precise threshold values for certain metrics, as is done in drought monitoring for example, because the cause of the 'departure' from a forecast needs to be understood just as much as by how much the deviation is.

3.343 While we recognise the need to monitor our progress, and potentially trigger action based on observable metrics, our consideration is that our regulators' representations are too focussed on a monitoring plan where we trigger action based on observed outcomes. Ofwat, for example, criticised our monitoring plan on the basis that it did not include thresholds linked to climate change impacts. We do not consider that we will be able to monitor the impacts of climate change on the likelihood of extreme drought events using observable metrics, particularly due to the loose link between emissions and our assessment of drought risk impacts (i.e. we could not link our adaptive plan to emissions or temperature thresholds). It would be far more likely that we would alter our plans subject to new forecasts of (or guidance on) climate change impacts. A core element of water resources planning is the use of forecasts to determine investment required to meet future risks, due to the long lead times associated with the construction of large water resources options. Our consideration is that Water Resources Management Plans should be proactive in setting out low-regrets investment, rather than being reactive and thus reliant on options with short lead times.

3.344 Also, we do not agree that it is useful to design a monitoring plan which extends beyond decisions which would be made at WRMP29. We will be required to produce a new Water Resources Management Plan for WRMP29 and, while we will report on progress against WRMP24 and comment on changes in forecasts and delivery, WRMP29 will be a new, standalone plan, rather than a simple choice of adaptive plan pathway. A significant reason for this is that the degree of change in guidance and expectations between successive rounds of water resources planning. We cannot design a monitoring plan which considers new, as yet unknown, policy proposals or changes in planning requirements, and so consider that our monitoring plan should be AMP7 and AMP8 focussed, and should determine whether we should continue with our existing plans, adopt alternative investment plans, or revise our WRMP between WRMP24 and WRMP29.

3.345 We recognise the representations from our regulators and stakeholders regarding the reliance on demand management to ensure a resilient water supply. We have also listened to feedback from the Environment Agency surrounding risks to the resilience of the plan in the very short-term, including risks which were highlighted in the 2022 drought, the risks around leakage and usage reduction during AMP7, and the River Thames flood alleviation Scheme. These are considered in our re-designed monitoring plan.

3.346 The revised monitoring plan has been designed with two phases to reflect the risks we face in the short-term, such as leakage reduction, and the risks we face in the longer-term eg reducing water use to 110 l/h/d.

- The short-term monitoring plan aims to ensure that the decisions to progress with the selected strategic resource options are robust, and that consenting is successful. It has two sub-phases focused on obtaining planning consent for the DRA scheme in west London (Stage 1a) and obtaining planning consent for the SESRO scheme (Stage 1b).
- The long-term monitoring plan aims to identify whether additional investment, beyond our preferred programme, is required to ensure resilient supplies.

3.347 As discussed, we have not designed a monitoring plan where we take action based on observations of individual factors. Investment needs in water resources planning are driven by combinations of factors and aggregate supply-demand balance impacts. The exceptions to this are that we may trigger additional interventions if we note that leakage and/or water demand are diverging from our targets, due to the policy-led nature of our planning with respect to these targets. In these circumstances, we may adopt additional leakage reduction and water efficiency activity.

3.348 Detailed information on the monitoring plan and the components of the monitoring plan is presented in Section 11 of the revised draft WRMP24.

Changes to our draft plan

3.349 We have retained the adaptive planning approach developed by WRSE, for the draft South East regional plan and the South East water companies WRMP24s. It is compliant with regulatory guidelines and we consider the approach is robust and fit for purpose. We have included additional information to explain the key decision points across the period, highlighting what decisions will be needed and how we will inform those decisions.

3.350 We have clearly presented the risks that we face in the short-term which include the output from our Gateway desalination plant, issues around our ability to abstract from the Lower Thames during low-flow events and confidence in our ability to sustainably reduce leakage and household consumption.

3.351 We have revised our monitoring plan to ensure we can track and mitigate the short-term risks with trigger points to identify whether we need to make different investment decisions.

Section 4

Updates to our draft plan

4.1 In this section we have summarised the main changes we have made to our draft plan in response to the detailed consideration to the representations received to the public consultation on our draft plan; the priorities and preferences of our customers; new information; and government policy and guideline requirements since our draft plan was published in late 2022.

4.2 We have worked with the other five water companies who operate in the South East of England, through WRSE, in revising our draft plan to ensure we have a coordinated approach to secure the region's future water supplies and provide best value to our customers. The WRSE also continued to communicate with the other regions to confirm the requirement for national options, such as a transfer from the River Severn.

4.3 For clarity, the planning objectives in developing our WRMP are:

- A secure and sustainable supply of water for our customers over the next 50 years, to protect against the growing risk of drought, plan for population growth and improve the environment
- A collaborative region-wide approach to planning water resources which provides best value for customers
- A plan that is adaptive, to ensure we can respond to a range of futures
- Ensure water supplies are resilient to a severe drought of 1 in 200-year frequency by the early 2030s and a drought of 1:500 year frequency by 2040
- To protect the environment and reduce abstractions which are considered to be damaging to the environment by 2050, or as soon as is practicable
- To halve leakage, as a minimum, by 2050, and achieve interim targets between 2025 and 2050
- To work collaboratively to achieve a sustainable reduction in household water use, achieving a water use of 110 l/h/d by 2050, and milestone targets between 2025 and 2050
- To work with businesses, in collaboration with retailers, to achieve a reduction in water use by 15% by 2050

Changes to our draft plan

4.4 Here is a summary of the main changes to our draft plan:

Baseline data and information	We have updated the baseline data to align with the Annual Review 2022. This update ensures we are basing our plan on the most up-to-date information. The Annual Review is available at www.thameswater.co.uk/wrmp
Population growth forecasts	We have updated our population forecasts using the most recent relevant data from the Office for National Statistics (ONS) and local authorities. We've complied with regulators' guidance in developing and using these forecasts. This is presented in Section 3 of our revised draft WRMP24.
Climate change forecasts	We developed a range of scenarios for climate change and have continued to adopt the high scenario in our reported pathway. We consider that this is a prudent approach. This is presented in Section 4 of our revised draft WRMP24.
Environmental forecast and environmental ambition	We have updated the scenarios for reducing abstraction and amended the timings of some of the proposed abstraction reductions to ensure these are delivered in line with regulatory guidance. We are committed to the highest scenario in our revised draft WRMP24 to ensure we can take timely action to protect the environment, taking around 500 Ml/d less water from sensitive rivers and waterways by 2050, targeting reductions in vulnerable catchments first. We'll continue studies, working with the Environment Agency, to make sure we fully understand how abstractions impact specific rivers and streams so we can prioritise action and take forward the right solutions to improve the environment. This is presented in Section 5 of our revised draft WRMP24.
Making the most of available resources	We have reviewed our leakage reduction programme and our demand reduction measures to align with the targets set out in the Government's Environmental Improvement Plan. This extends and brings forward demand management measures earlier in the plan period such that around 80% of the forecast water shortfall is now met through these measures, together with drought measures, by 2050. This emphasis on leakage reduction and demand management is the most significant change to our draft plan. This scale of activity is very ambitious and has not been achieved previously. It will take concerted, collaborative activity by government, stakeholders and water companies and a transformation in how companies work with customers to help them reduce their water use. The options are described in Section 8 of our revised draft plan.
Water resource options	We have updated information on new water resource options to ensure we are developing the plan using the best available evidence. Our

	revised draft WRMP24 includes a number of small water sources as well as the new river abstraction at Teddington supported by water recycling and a new reservoir in Oxfordshire, which is larger than proposed in the draft plan at 150 Mm^3. The Severn Thames Transfer is not included in our revised draft WRMP24, however we have proposed that we should continue to develop the transfer scheme as a reserve option which will allow us to act quickly if additional water is needed in the future. The options are described in Section 7 of our revised draft WRMP24.
Best value and adaptive planning	Working with WRSE we completed detailed technical work, including testing the sensitivity of the plan to a wide range of scenarios, to develop the best value plan for the South East region. The best value planning approach takes account of a wide range of factors including cost, environmental impact and resilience. Over the next ten years, we can be confident in our forecasts and have developed a single plan to allow us to progress activities and give best value to our customers. Looking further into the future there are more uncertainties, which is why we've followed an adaptive planning approach with check points to let us adapt and modify our plan in response to how the future materialises. This is described in Section 10 of our revised draft WRMP24.
Monitoring	We have developed a monitoring plan and will closely track and report progress to make sure we are on the right course.

Our revised draft WRMP24.

4.5 In our revised draft WRMP24, we set out the significant planning challenge we face driven by our changing climate, our growing population and the need to protect the environment. We forecast a shortfall of around 1 billion litres of water per day by 2050, this is equivalent to the water needed by around 3.5 million people.

4.6 The foundation of our revised draft plan is the effective use of available resources which contribute over 80% of the forecast water shortfall by 2050 The measures include:

- Cutting the amount of water lost through leaks by over 50% by 2050. We have extended our leakage reduction proposals to go beyond the government's target. This is ambitious and will require significant investment and new and innovative approaches to ensure it is deliverable. We will also work to achieve the interim targets set out by government.
- Helping our customers to reduce their water use to 110 litres per head per day, on average, by 2050. We will continue to install smart water meters to help customers understand their water use and encourage them to use water wisely. We will install and upgrade a further 1,000,000 smart meters by 2030 in London and the Thames Valley which will achieve 80% of households with a meter in London and 93% in the Thames Valley. We will also continue to install 'bulk' meters on large and small blocks of flats to help us understand leakage and high wastage on these buildings. Government will also

need to bring forward new regulations and policies such as bringing in new standards for water using products and product labelling, and updating building regulations for new homes. The government-led measures are forecast to save around a third of the forecast water saved.

- Working closely with business to reduce their water use by 15% by 2050. We will design and deliver the programme with water retailers.

4.7 The measures to manage the demand for water will not be enough on their own to address the water resource shortfall and we also need to develop new water resources. As part of WRSE we looked at a wide range of feasible options and our revised draft plan presents the development and extension of several groundwater schemes, the extension of an existing commercial agreement to buy water from a third party, a water transfer using the Oxford Canal in partnership with the Canal and River Trust and strategic schemes that will serve water to London and the Thames Valley as well as across the South East region.

4.8 A summary of the new water resources included in the revised draft plan is shown in Figure 4-1 below.

Figure 4-1: New water supply schemes included in the revised draft WRMP24

4.9 **Teddington Direct River Abstraction** – We propose to develop a new abstraction in west London from 2033. We need a new water source in the early 2030s to ensure we can supply a secure water supply to our customers during severe drought events. Working with WRSE we have considered a range of options and have undertaken detailed modelling and testing of the regional plan, this work has determined that the direct river abstraction is the best value scheme to increase our drought resilience in London, and it can be ready by 2033. We have listened to concerns raised by the local community about the perceived public health and environmental impact of the scheme. We have completed initial assessments,

including environmental and water quality monitoring, the results of which show that the scheme presents a low risk to the environment, and the risks can be mitigated. We are continuing to do more detailed assessments in consultation with the Environment Agency, Natural England, the Drinking Water Inspectorate and other stakeholders. We will share this work with the local community when it is ready and ensure there is sufficient opportunity for scrutiny and discussion.

4.10 A new reservoir in Oxfordshire from 2040 – The detailed modelling and sensitivity assessments completed by WRSE have confirmed that the reservoir is an integral part of the best value plan to provide water for the South East from 2040. The proposed reservoir is bigger than in the draft plan at 150 Mm^3 and can provide a resilient source of water with low operating costs and ensure sharing of water across the South East. A 150 Mm^3 reservoir would also give us around 50% more water for a relatively small increase in investment compared to a 100 Mm^3 reservoir, providing water for Affinity Water, Southern Water and Thames Water customers. We recognise there is some local opposition to the reservoir, we have listened to concerns raised and in February 2023 we published a statement of community commitments (www.thames-wrmp.co.uk) to reassure the community that we were listening. One of the commitments is that we will continue to engage with local communities as part of the rigorous planning process providing opportunities for scrutiny and comment on the work.

4.11 The water transfer from the River Severn is not included in the revised draft plan with the greater contribution to the shortfall now made by leakage and demand reduction. We have proposed to continue to undertake studies on the scheme to address issues raised by regulators and stakeholders should it be needed in the future. We will also continue to consider other water recycling options to support the need for water in our London zone in the early 2030s.

4.12 We consider that our revised draft WRMP24 is the best value plan for our area for the planning period to 2075. Our plan is based on the best available data and evidence and, while we're confident in our plan, we do need to monitor progress and have back up plans if things don't turn out the way we've predicted. We'll review progress annually and every 5 years we will do a full review our plan to make sure we are still on the right course.

Section 5

Next steps

5.1 We have submitted our Statement of Response (this document) and our revised draft WRMP24 to the Secretary of State for the Environment, Food and Rural Affairs for consideration and guidance on the next steps. The Secretary of State may choose to: 1) approve to finalise the plan, 2) request further changes to the revised draft plan or 3) call a hearing or inquiry before finalisation of the WRMP to ensure further scrutiny.

5.2 We have published the Statement of Response (this document) and our revised draft plan on our website www.thames-wrmp.co.uk and advised everyone who participated in the consultation. We have provided a unique registration number to consultees to enable them to read the bespoke response to their representation.

5.3 WRSE has also published the revised draft regional plan for information, and in support of the statutory WRMP process.

The process we have followed and the next steps are shown in Figure 5-1.

5.4 We'll continue to involve our customers and communities, and to listen to all opinions and act where we can.

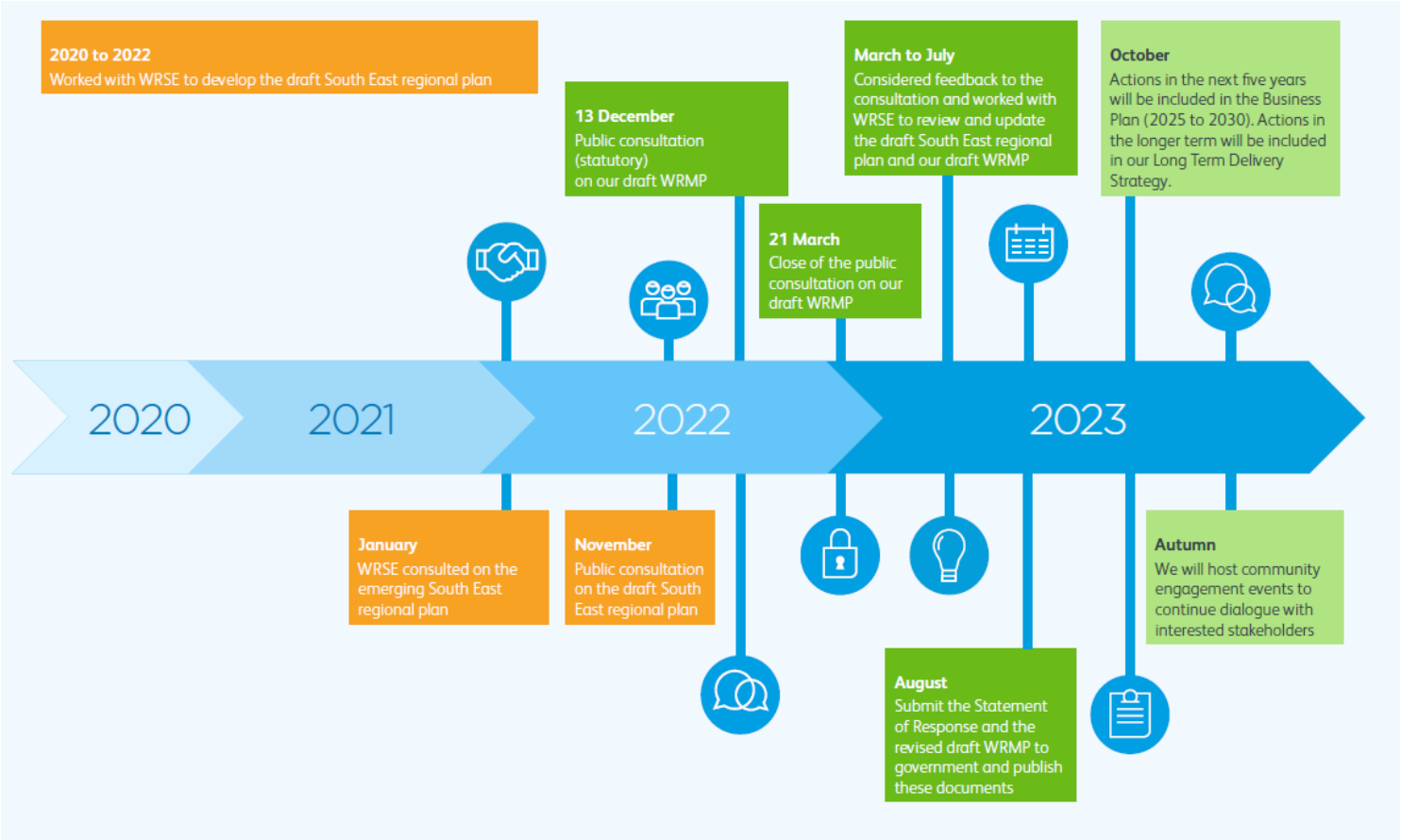


Figure 5-1: The process followed to develop the revised draft WRMP24 and the next steps

Annex 1: List of consultees

An email was sent to 2,006 stakeholder organisations and individuals. The mailing list comprised statutory consultees; retailers; developers; stakeholder organisations and individuals who had expressed an interest in the public consultation on WRMP19 and had provided their email address; and respondents to the draft WRMP19 public consultation.

The following list comprises the stakeholder organisations who were contacted by email. Individuals have not been included in the list due to privacy and data protection.

Organisations
Earl of Plymouth Estates Limited
Ardington and Lockinge Parish Council
Steventon Parish Council
Civil Service Angling Society
Cotswolds Rivers Trust
West Hanney Parish Council
Lea Boaters Collective
Ver Valley Society
National Federation of Self Employed & Small Businesses Limited
Gloucestershire County Council
Gloucester City Council
Campaign to Protect Rural England
Cotswold Canal Trust
Group Against Reservoir Development (GARD)
Drayton Parish Council
Milton (Abingdon) Parish Council
Wantage Town Council
London Assembly Environment Committee
Greater London Authority
Banbury Ornithological Society
Centre for Competition Policy (CCP) at the University of East Anglia (UEA)
Chinmaya Mission UK
Gerrards Cross and Uxbridge Angling Society
GMB Trade Union
The Federation of Groundwork Trusts
GVA
Hillesden Trust
Kennet Valley Fishery Association
Lechlade Marina Limited
London Waterkeeper
MBNA Thames Clippers
Old Windsor Angling Club
Stonebridge Lock Coalition

Organisations
Thame Valley Fisheries Preservation Consultative
Wantage and Grove Campaign Group
Waterlevel Limited
Radley Parish Council
Kempsford Parish Council
West Berkshire Council
Vale Of White Horse District Council
London Borough of Camden
London Borough of Croydon
London Borough of Havering
London Borough of Islington
London Borough of Merton
London Borough of Redbridge
London Borough of Southwark
London Borough of Tower Hamlets
London Borough of Wandsworth
Ock Catchment Partnership
Stroud Valleys Canal Company
Wildfowl and Wetlands Trust
Ardington and Lockinge Parish Council
East Hanney Parish Council
Steventon Parish Council
Sutton Courtenay Parish Council
Abingdon-on-Thames Town Council
Lee Valley Regional Park Authority
Sutton and East Surrey Water Services Limited
Hogsmill Catchment Partnership
Dartford Borough Council
London Borough of Ealing
London Borough of Enfield
London Borough of Hillingdon
London Borough of Hounslow
London Borough of Lewisham
Slough Borough Council
Spelthorne Borough Council
London Borough of Watford
Waverley Borough Council
Woking Borough Council
Epsom and Ewell Borough Council
London Borough of Barnet
London Chamber of Commerce and Industry
Oxford City Council
Wiltshire Council
Harlow District Council

Organisations
Tandridge District Council
Uttlesford District Council
Biodiversify Limited
Chalk Streams First
Colne Catchment Action Network (ColneCAN)
Cotswolds Rivers Trust
Crane Valley Partnership
London Wildlife Trust
National Federation of Anglers
Ravensbourne Catchment Improvement Group
Revivel Association
Rickmansworth Waterways Trust
River Beane Restoration Association (RBRA)
River Lee Catchment Partnerships
River Thame Conservation Trust
River Thames Society
Severn Rivers Trust
Thame Catchment Partnership
Thames Anglers Conservancy
Thamesmead and Marsh Dykes Catchment Partnership
Action for the River Kennet (ARK)
National Trust (London & South East)
South East Rivers Trust
Surrey Hills AONB
St Helen Without Parish Council
West Hanney Parish Council
East Hendred Parish Council
ADSM
Affinity for Business
Anglian Water Business (National) Limited (Wave)
Business Stream Limited
Cambrian Utilities Limited
Castle Water (Southern) Limited
Clear Business Water
Everflow Limited
First Business Water Limited
Greene King Limited
Independent Water Networks Limited
NWG Business Limited
Pennon Water Services Limited
Regent Water Limited
South East Water Choice
The Water Retail Company Limited
Three Sixty

Organisations
Water Plus Select Limited
Water 2 Business Limited
Waterscan Limited
Yu Energy Retail Limited
Olympos Water Limited
Chilterns AONB & Chilterns Chalk Stream Project
River Loddon Catchment Group
Thames Estuary Partnership
Upper Thames Catchment Management Sub Group
Ver Valley Society
South West Water Limited
Southern Water Services Limited
Yorkshire Water Services Limited
London Anglers
Richmond Biodiversity Partnership
Richmond Canoe Club
Ernest Cook Trust
Cotswold Water Park Trust
Friends of the Mimram
South East Councils
London Environment Directors Network (LEDNet)
London Borough of Barking and Dagenham
London Borough of Haringey
Royal Borough of Kingston Upon Thames
London Borough of Newham
London Borough of Richmond Upon Thames
London Borough of Waltham Forest
Surrey County Council
London Borough of Lambeth
Dacorum Borough Council
London Borough of Hackney
London Borough of Kingston
London Borough of Bromley
Wokingham Borough Council
Broxbourne Borough Council
London Borough of Sutton
Reading Borough Council
London Borough of Harrow
London Borough of Bexley
Guildford Borough Council
London Borough of Greenwich
Royal Borough of Kensington and Chelsea
Royal Borough of Windsor and Maidenhead
London Borough of Hammersmith and Fulham

Organisations
Bracknell Forest Council
London Borough of Brent
Swindon Borough Council
CBI Thames Valley
Country Land and Business Association Limited
Association of Electricity Producers Limited (Energy UK)
Environmental Change Institute University of Oxford
National Federation of Self Employed & Small Businesses Limited
Homes England
National Farmers Union
Network Rail Limited
Oxford Brookes University
Oxfordshire Business First
OxLEP
Thames Valley Chamber of Commerce Group
The Oxford Trust
Hampshire County Council
Gloucestershire County Council
Oxfordshire County Council
Cherwell District Council
Cotswold District Council
Epping Forest District Council
Gloucester City Council
Horsham District Council
Mole Valley District Council
South Oxfordshire District Council
Stroud District Council
West Oxfordshire District Council
Wycombe District Council
Port of London Authority
RWE Generation UK plc
Abingdon Civic Society
Amwell Magna Fishery
Angling Trust
Basingstoke Canal Authority
The Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
Campaign to Protect Rural England
Campaign to Protect Rural England Gloucestershire
Campaign to Protect Rural England Oxfordshire
Canal & River Trust
Chartered Institute of Water and Environmental Management
Cherwell Catchment Group & The Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
Chiltern Society

Organisations
Chilterns AONB
Cotswold Canal Trust
Cotswold National Landscape
Cotswolds AONB
Cotswolds Trails & Access Partnership
Cray & Darent Catchment Improvement Group
Evenlode Catchment Partnership
Freshwater Habitats Trust
Group Against Reservoir Development (GARD)
Gloucestershire Wildlife Trust
Historic England Limited
Misbourne River Action
National Trust
North Cotswolds Ramblers
North Wessex Downs AONB
Oxford Preservation Trust
Oxford Transport and Access Group
Oxfordshire Ramblers
River Dour Catchment Partnership
Royal Society for the Protection of Birds
Salmon and Trout Conservation
Stroudwater Navigation Canal Company
Surrey Wildlife Trust
Sustrans
Thames21 Limited
The Nature Conservancy (TNC)
Wey Landscape Partnership
Wild Oxfordshire
Wildlife Trusts
The Wilts & Berkshire Canal Trust
Windrush Catchment Group
Woodland Trust
Zoological Society of London
Darent River Preservation Society
Thames Rivers Trust
The Rivers Trust
Uxbridge Rovers Angling and Conservation Society
Environment Agency
Natural England
Natural Resources Wales
RAPID
OFWAT
Welsh Assembly
Department for Environment, Food and Rural Affairs

Organisations
The Consumer Council for Water
Drinking Water Inspectorate (DWI)
Conservative
Labour
Liberal Democrat
UK Centre for Ecology & Hydrology
Pang Valley Flood Forum
Royal Parks
Cranleigh Parish Council
Drayton Parish Council
Frilford Parish Council
Fyfield and Tubney Parish Council
Garford Parish Council
Grove Parish Council
Lyford Parish Council
Marcham Parish Council
Milton (Abingdon) Parish Council
West Hendred Parish Council
Culham Parish Council
Wantage Town Council
City of Westminster
London Assembly Environment Committee
City of London Corporation Limited
Greater London Authority
London Councils
Planning Chair
Royal Berkshire Fire & Rescue Service
Albion Water Limited
BUUK Infrastructure No 2 Limited
ConservAqua Limited
Icosa Water Services Limited
Severn Trent Connect
Smarta Water Limited
Uniper Energy Limited
Lower Lea Catchment Partnership
River Chess Association
Roding Beam & Ingrebourne Catchment Partnership
Company of Proprietors of the Stroudwater Navigation
Bristol Water plc
Dwr Cymru Welsh Water
Portsmouth Water Limited
Severn Trent plc
South East Water Limited
SSE Water

Organisations
Affinity Water Limited
Essex and Suffolk Water Limited
South Staffs Water Plc
Richmond & Twickenham Green Party
United Spelthorne Group
Independent
Royal Society for the Protection of Birds Central London Local Group
Wildfowl and Wetland Trust London Wetland Centre
London Natural History Society
The London Bat Group
London Rowing Club
Royal Society for the Protection of Birds North East London
The River Roding Trust
Twickenham Society
Richmond Environmental Information Centre
Royal Society for the Protection of Birds Richmond & Twickenham Local Group
Teddington Society - Environment Working Group
Royal Canoe Club
Walbrook Rowing Club
Besselsleigh Parish Council
Wootton (Abingdon) Parish Council
Sunningwell Parish Council
Radley Parish Council
Oxford University
Tim Russ Co Estate Agent
Tewkesbury Borough Council
Prescott Parish Council
Winchcombe Parish Council
Welsh Government
Wales Water Management Forum
Confederation of Forest Industries
Welsh Local Government Association
NFU Cymru
Consumer Council for Wales
Afonydd Cymru
North Wales Wildlife Trust
Wye and Usk Foundation
Worcester City Council
Shropshire Council
Powys County Council
Wyre Forest District Council
Colne Valley Fisheries Consultative
SES Water Limited
SES Business Water

Organisations
Basingstoke and Deane Borough Council
Market Operator Services Limited
Banbury Parliamentary Constituency
Brentford and Isleworth Parliamentary Constituency
Broxbourne Parliamentary Constituency
Chesham and Amersham Parliamentary Constituency
Crawley Parliamentary Constituency
East Ham Parliamentary Constituency
Edmonton Parliamentary Constituency
Enfield North Parliamentary Constituency
Feltham and Heston Parliamentary Constituency
Henley Parliamentary Constituency
Leyton and Wanstead Parliamentary Constituency
North Swindon Parliamentary Constituency
Oxford East Parliamentary Constituency
Oxford West and Abingdon Parliamentary Constituency
Richmond Park Parliamentary Constituency
Richmond Park Parliamentary Constituency
Spelthorne Parliamentary Constituency
Tewkesbury Parliamentary Constituency
The Cotswolds Parliamentary Constituency
Tottenham Parliamentary Constituency
Twickenham Parliamentary Constituency
Twickenham Parliamentary Constituency
Walthamstow Parliamentary Constituency
Wantage Parliamentary Constituency
Witney Parliamentary Constituency
Advanced Demand Side Management Limited
Anglian Water
The Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust Representatives
Bristol Water
Centre for Ecology & Hydrology (CEH)
Revivel Association
Runnymede Borough Council
South East Councils
Waterwise
Wave
Thames Water Customer Challenge Group (TW CCG)
Thames River Trust
Gloucester Borough
Stroud Parliamentary Constituency
Stroud Parliamentary Constituency
Aldershot Parliamentary Constituency
Aylesbury Parliamentary Constituency

Organisations
Barking Parliamentary Constituency
Battersea Parliamentary Constituency
Beaconsfield Parliamentary Constituency
Beckenham Parliamentary Constituency
Bermondsey and Old Southwark Parliamentary Constituency
Bethnal Green and Bow Parliamentary Constituency
Bexleyheath and Crayford Parliamentary Constituency
Bracknell Parliamentary Constituency
Brent Central Parliamentary Constituency
Brent North Parliamentary Constituency
Brentwood and Ongar Parliamentary Constituency
Bromley and Chislehurst Parliamentary Constituency
Camberwell and Peckham Parliamentary Constituency
Carshalton and Wallington Parliamentary Constituency
Chelsea and Fulham Parliamentary Constituency
Chichester Parliamentary Constituency
Chingford and Woodford Green Parliamentary Constituency
Chipping Barnet Parliamentary Constituency
Cities of London and Westminster Parliamentary Constituency
Croydon Central Parliamentary Constituency
Croydon North Parliamentary Constituency
Croydon South Parliamentary Constituency
Dagenham and Rainham Parliamentary Constituency
Dartford Parliamentary Constituency
Daventry Parliamentary Constituency
Devizes Parliamentary Constituency
Dulwich and West Norwood Parliamentary Constituency
Ealing Central and Acton Parliamentary Constituency
Ealing North Parliamentary Constituency
Ealing, Southall Parliamentary Constituency
East Hampshire Parliamentary Constituency
East Surrey Parliamentary Constituency
Enfield, Southgate Parliamentary Constituency
Epping Forest Parliamentary Constituency
Epsom and Ewell Parliamentary Constituency
Erith and Thamesmead Parliamentary Constituency
Esher and Walton Parliamentary Constituency
Finchley and Golders Green Parliamentary Constituency
Greenwich and Woolwich Parliamentary Constituency
Guildford Parliamentary Constituency
Hackney North and Stoke Newington Parliamentary Constituency
Hackney South and Shoreditch Parliamentary Constituency
Hammersmith Parliamentary Constituency
Hampstead and Kilburn Parliamentary Constituency

Organisations
Harrow East Parliamentary Constituency
Harrow West Parliamentary Constituency
Hayes and Harlington Parliamentary Constituency
Hemel Hempstead Parliamentary Constituency
Hendon Parliamentary Constituency
Hertford and Stortford Parliamentary Constituency
Hertsmere Parliamentary Constituency
Hitchin and Harpenden Parliamentary Constituency
Holborn and St Pancras Parliamentary Constituency
Hornchurch and Upminster Parliamentary Constituency
Hornsey and Wood Green Parliamentary Constituency
Horsham Parliamentary Constituency
Ilford North Parliamentary Constituency
Ilford South Parliamentary Constituency
Islington North Parliamentary Constituency
Islington South and Finsbury Parliamentary Constituency
Kenilworth and Southam Parliamentary Constituency
Kensington Parliamentary Constituency
Kingston and Surbiton Parliamentary Constituency
Lewisham East Parliamentary Constituency
Lewisham West and Penge Parliamentary Constituency
Lewisham, Deptford Parliamentary Constituency
Luton North Parliamentary Constituency
Luton South Parliamentary Constituency
Maidenhead Parliamentary Constituency
Mid Bedfordshire Parliamentary Constituency
Mole Valley Parliamentary Constituency
Newbury Parliamentary Constituency
North East Hampshire Parliamentary Constituency
North East Hertfordshire Parliamentary Constituency
North West Hampshire Parliamentary Constituency
North Wiltshire Parliamentary Constituency
Old Bexley and Sidcup Parliamentary Constituency
Orpington Parliamentary Constituency
Poplar and Limehouse Parliamentary Constituency
Putney Parliamentary Constituency
Reading East Parliamentary Constituency
Reading West Parliamentary Constituency
Reigate Parliamentary Constituency
Romford Parliamentary Constituency
Ruislip, Northwood and Pinner Parliamentary Constituency
Runnymede and Weybridge Parliamentary Constituency
Saffron Walden Parliamentary Constituency
Sevenoaks Parliamentary Constituency

Organisations
Slough Parliamentary Constituency
South Northamptonshire Parliamentary Constituency
South Swindon Parliamentary Constituency
South West Bedfordshire Parliamentary Constituency
South West Hertfordshire Parliamentary Constituency
South West Surrey Parliamentary Constituency
St Albans Parliamentary Constituency
Stevenage Parliamentary Constituency
Stratford-on-Avon Parliamentary Constituency
Streatham Parliamentary Constituency
Surrey Heath Parliamentary Constituency
Sutton and Cheam Parliamentary Constituency
Tonbridge and Malling Parliamentary Constituency
Tooting Parliamentary Constituency
Uxbridge and South Ruislip Parliamentary Constituency
Vauxhall Parliamentary Constituency
Watford Parliamentary Constituency
Welwyn Hatfield Parliamentary Constituency
West Ham Parliamentary Constituency
Westminster North Parliamentary Constituency
Wimbledon Parliamentary Constituency
Windsor Parliamentary Constituency
Woking Parliamentary Constituency
Wycombe Parliamentary Constituency
Eltham Parliamentary Constituency
Harlow Parliamentary Constituency
Mitcham and Morden Parliamentary Constituency
Forest of Dean Parliamentary Constituency
Water Resources West
Water Resources East
Water Resources West Country
Water Resources North
Forestry Commission
National Infrastructure Commission
Sustainability First
United Utilities
Wessex Water
Cotswolds Flyfishers
Buckingham Parliamentary Constituency
Buglife Services Limited
Basingstoke Parliamentary Constituency

Source: Thames Water

Annex 2: Email advising of the public consultation

Today marks the start of a public consultation on the future of our water supply

Substantial water shortages face the whole of the south east of England. The extreme heat and lack of water we had over this summer make it clear that this situation is likely to get worse. We have worked closely with Water Resources South East (WRSE) and our neighbouring water companies - Affinity Water, Portsmouth Water, SES Water, South East Water and Southern Water to plan ahead and build future resilience for the benefit of our customers now and in the future, and the environment.

Our draft Water Resources Management Plan 2024 sets out the predicted water supply shortages and how we intend to provide a secure water supply for our growing population; protect against the growing risk of drought; and improve the environment over the next 50 years. Our plan sets out ambitious reductions in leakage, actions to reduce the amount of water we all use and investment in new infrastructure including a new river abstraction in west London, a new reservoir in Oxfordshire, and water transfers between regions and across the South East.

We want to hear what you think

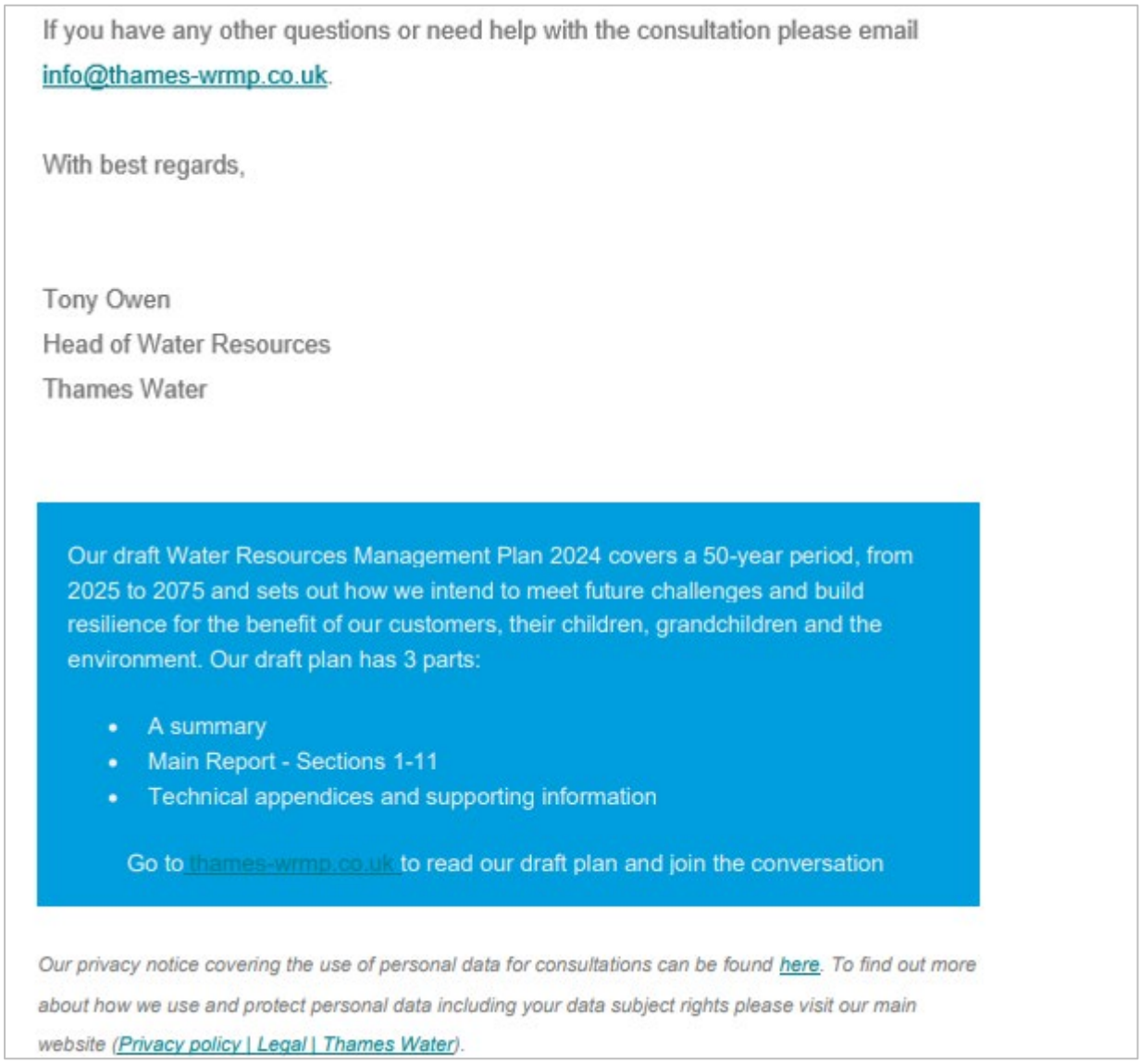
We're consulting on our draft plan until 21 March 2023. You can read a summary of our draft plan, and the detailed technical reports, and have your say on our dedicated consultation website www.thames-wrmp.co.uk. Tell us what you think. Your feedback will help us to refine our draft plan. We'll carefully consider all the responses we receive and in June 2023 we'll publish a report setting out how we have taken the comments into account in revising our draft plan.

Throughout the consultation we're holding information events across our area including in Cirencester, Abingdon, Richmond and Steventon to give you the chance to talk to us about our draft plan and give us your feedback. Details of where we will be and when are on our website www.thames-wrmp.co.uk/events.

WRSE is also consulting on the draft regional plan and the other SE water companies are carrying out statutory consultations on their individual dWRMP24s. These are separate consultations, which explain how each company will secure supplies for their customers. Links to each company's website, where you can find out more, are set out below.

- WRSE
- Affinity Water
- Portsmouth Water
- SES Water
- South East Water
- Southern Water.

You are receiving this email because you have previously participated in a public consultation on future water resources. If you do not want to receive emails in connection with water resources or the draft WRMP please click unsubscribe to request to be removed from this mailing list.



If you have any other questions or need help with the consultation please email info@thames-wrmp.co.uk.

With best regards,

Tony Owen
Head of Water Resources
Thames Water

Our draft Water Resources Management Plan 2024 covers a 50-year period, from 2025 to 2075 and sets out how we intend to meet future challenges and build resilience for the benefit of our customers, their children, grandchildren and the environment. Our draft plan has 3 parts:

- A summary
- Main Report - Sections 1-11
- Technical appendices and supporting information

Go to thames-wrmp.co.uk to read our draft plan and join the conversation

Our privacy notice covering the use of personal data for consultations can be found here. To find out more about how we use and protect personal data including your data subject rights please visit our main website (Privacy policy | Legal | Thames Water).

Appendix Figure 2-1: Notification of the launch of the consultation on our draft WRMP24 – respondents to WRMP19 consultation

Today marks the start of a public consultation on the future of our water supply

Substantial water shortages face the whole of the south east of England. The extreme heat and lack of water we had over this summer make it clear that this situation is likely to get worse. We have worked closely with Water Resources South East (WRSE) and our neighbouring water companies - Affinity Water, Portsmouth Water, SES Water, South East Water and Southern Water - to plan ahead and build future resilience for the benefit of our customers now and in the future, and the environment.

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We want to hear what you think

We're consulting on our draft plan until 21 March 2023. You can read a summary of our draft plan, and the detailed technical reports, and have your say on our dedicated consultation website www.thames-wrmp.co.uk. Tell us what you think, your feedback will help us to refine our draft plan. We'll carefully consider all the responses we receive and in June 2023 we'll publish a report setting out how we have taken the comments into account in revising our draft plan.

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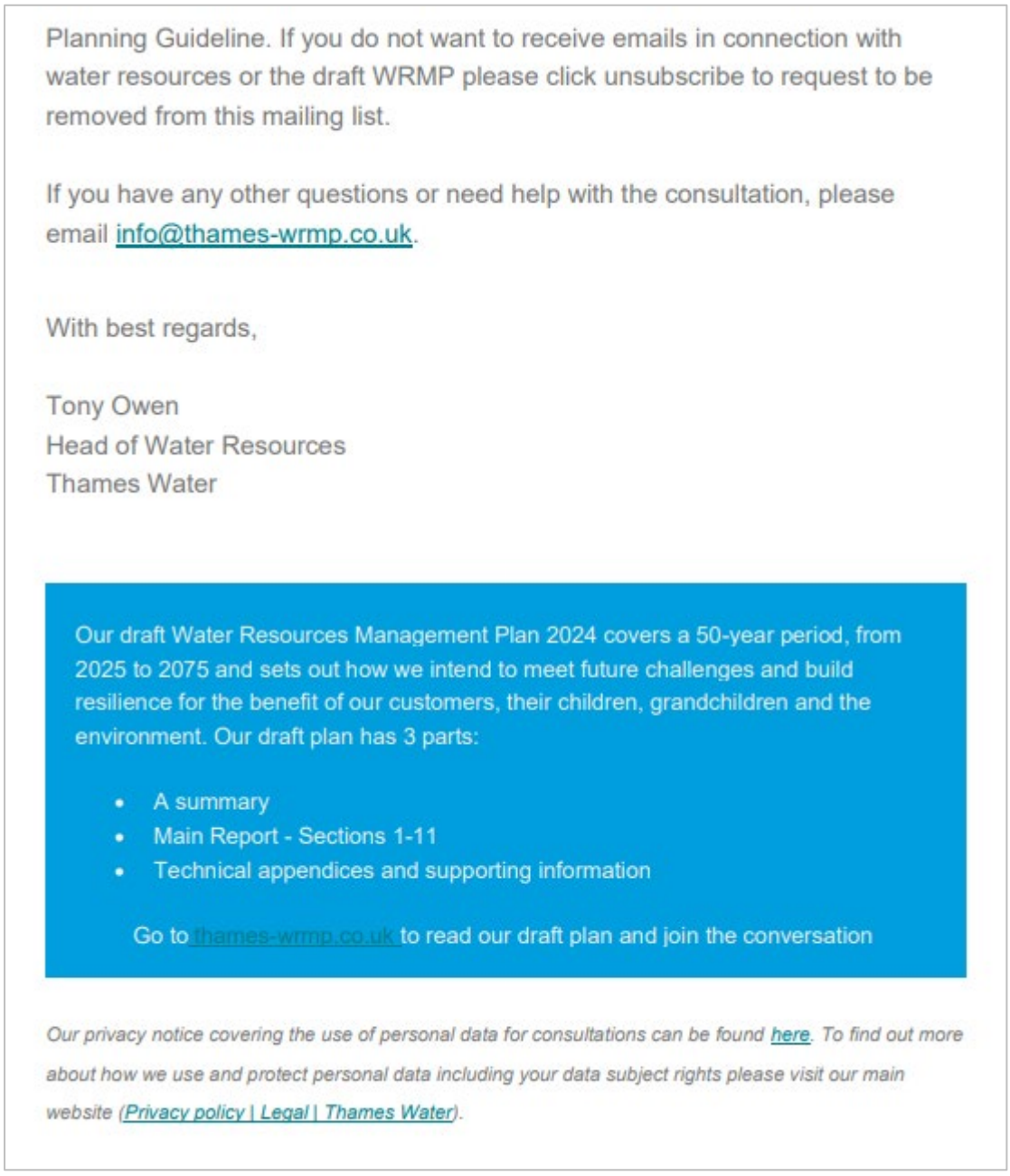
WRSE is also consulting on the draft regional plan and the other SE water companies are carrying out statutory consultations on their individual dWRMP24s. These are separate consultations, which explain how each company will secure supplies for their customers. Links to each company's website, where you can find out more, are set out below.

- WRSE
- Affinity Water
- Portsmouth Water
- SES Water
- South East Water
- Southern Water.

You are receiving this email because you have previously engaged with us on water resource matters or are a named consultee in the Water Resources



Planning Guideline. If you do not want to receive emails in connection with water resources or the draft WRMP please click unsubscribe to request to be removed from this mailing list.

If you have any other questions or need help with the consultation, please email info@thames-wrmp.co.uk.

With best regards,

Tony Owen
Head of Water Resources
Thames Water

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- Technical appendices and supporting information

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Appendix Figure 2-2: Notification of the launch of the consultation on our draft WRMP24 – Standard

Annex 3: Public consultation questions

The consultation questions included in the online survey for the public consultation and also used with the customer online community are presented in the table below. Consultees could answer all, or a selection of these questions, or give a freeform response by email or in writing.

The consultation questions

1. We've chosen to aim for the highest level of environmental improvements. This is supported by our regulators. We'll be tracking the benefits of our work as we carry it out and will adapt our approach as we learn more. Do you have any comments on our approach?
2. We've set out our plan for reducing demand, with government interventions, to achieve 123 litres of water per person per day on average. This is above the government's national target, but we think it's the right approach. We'll monitor and develop this by building on our learnings and evidence. Do you have any comments on our approach or suggestions for additional measures we could take?
3. Measures to reduce demand for water make up over 50% of our forecast shortfall by 2050. Some of the activity is untested and not within our direct control. Do you think this is the right approach? Should we plan for additional new sources of water in case these measures don't deliver the water we've forecast?
4. A new reservoir is an integral part of our best value plan for the South East. Do you have any comments on the size of a new reservoir?
5. Do you have any comments on the new water source options included in our draft plan?
6. Do you think our draft plan represents the best value plan for you, your community and the environment?
7. Do you have any other comments on our draft plan?

Annex 4: SESRO Community Commitments

Update for local community

info@thames-wrmp.co.uk

16 February 2023

Community Commitments

Dear Customer

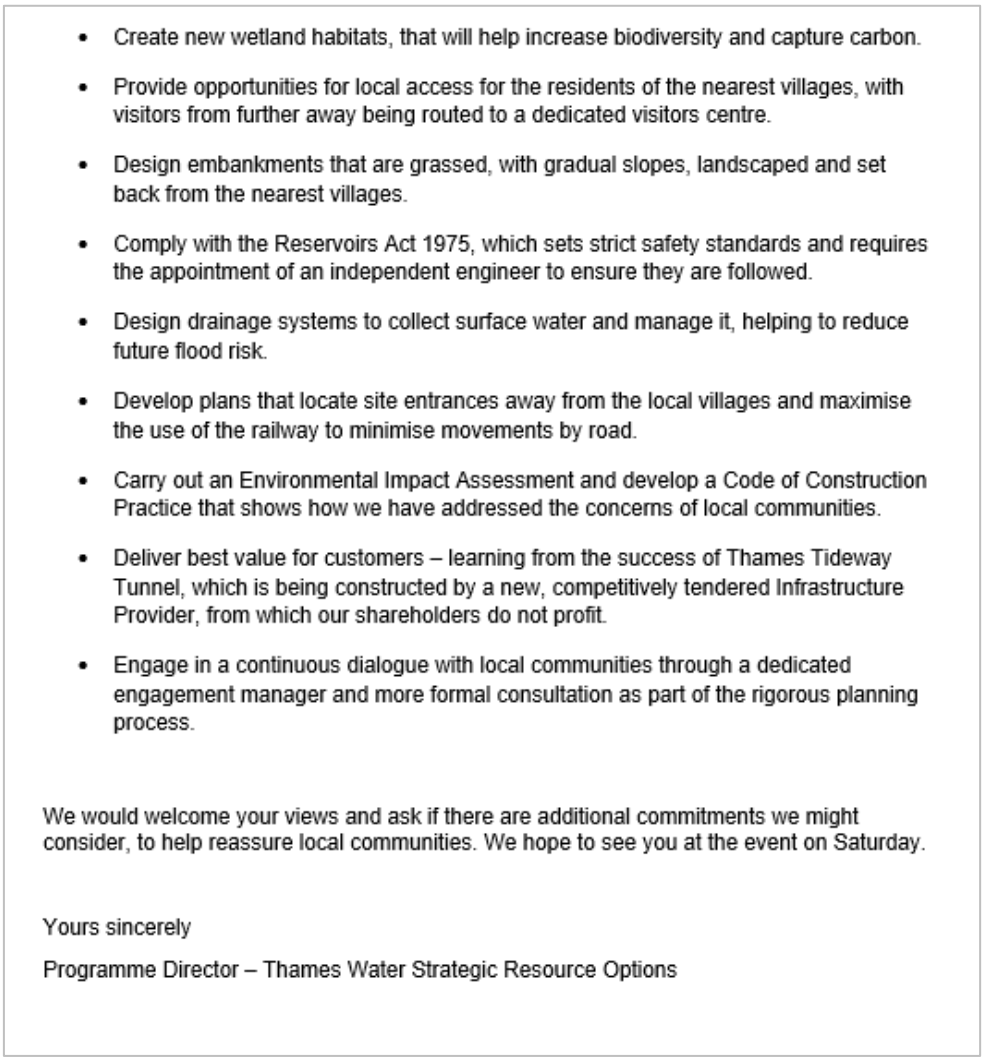
You will be aware that Thames and Affinity are currently consulting on our draft Water Resources Management Plans (dWRMP), which set out how we are going to provide a safe and resilient water supply for our customers for the next 50 years. These plans include a proposal for reservoir to support the south east region, near Abingdon, known as the South East Strategic Reservoir Option (SESRO).

We are looking forward to welcoming visitors to our community event at Steventon Village Hall on Saturday 18 February between 12pm and 6pm, where we hope to provide a chance for people to learn more about the dWRMP, but we also expect the greatest interest will be in SESRO and the choice of a reduced size in the plan.

From listening to the concerns of the community we are aware that we need to do more to reassure people that no decision has been made to proceed. Before any approval could be granted a rigorous planning process would scrutinise the proposal and be subject to approval by the Secretary of State.

We are also aware that people may have been presented with a range of information about the reservoir but that some of it risks being misleading. With this in mind we would like to commit to you that, should the reservoir go ahead, we will:

- Work with the community to develop a design that delivers opportunities for accessible recreation, leisure and education.
- Be open to ideas for community partnerships, including the creation of new open spaces, orchards and woodlands.
- Work with schools and colleges to develop opportunities for local training and employment.
- Work with local groups to incorporate activities such as sailing, fishing, bird watching, paddle/wind sports, running, cycling and trail walking – as with other lakes across the UK.



- Create new wetland habitats, that will help increase biodiversity and capture carbon.
- Provide opportunities for local access for the residents of the nearest villages, with visitors from further away being routed to a dedicated visitors centre.
- Design embankments that are grassed, with gradual slopes, landscaped and set back from the nearest villages.
- Comply with the Reservoirs Act 1975, which sets strict safety standards and requires the appointment of an independent engineer to ensure they are followed.
- Design drainage systems to collect surface water and manage it, helping to reduce future flood risk.
- Develop plans that locate site entrances away from the local villages and maximise the use of the railway to minimise movements by road.
- Carry out an Environmental Impact Assessment and develop a Code of Construction Practice that shows how we have addressed the concerns of local communities.
- Deliver best value for customers – learning from the success of Thames Tideway Tunnel, which is being constructed by a new, competitively tendered Infrastructure Provider, from which our shareholders do not profit.
- Engage in a continuous dialogue with local communities through a dedicated engagement manager and more formal consultation as part of the rigorous planning process.

We would welcome your views and ask if there are additional commitments we might consider, to help reassure local communities. We hope to see you at the event on Saturday.

Yours sincerely

Programme Director – Thames Water Strategic Resource Options

Appendix Figure 4-1: SESRO Community Commitments

Source: Thames Water

Appendix A - Response to EA's representation

Please see separate document.

Appendix B - Response to Ofwat's representation

Please see separate document.

Appendix C - Response to Natural England's representation

Please see separate document.

Appendix D - Response to Historic England's representation

Please see separate document.

Appendix E - Response to Natural Resources Wales representation

Please see separate document.

Appendix F - Response to CCW's representation

Please see separate document.

Appendix G1 - Response to representations from organisations

Please see separate document.

Appendix G2 - Response to representations from the following organisations – Chalk Stream First, Greater London Authority, Group Against Reservoir Development, Oxfordshire County Council and the Vale of White Horse District Council

Please see separate document.

Appendix H - Response to representations from individuals

Please see separate document.

Appendix I - Response to online representations

Please see separate document.

Appendix J - Response to representations on Severn to Thames Transfer (STT)

Please see separate document.


Thames
Water