



# Annex D: Stakeholder and Customer Engagement Report

Standard Gate two submission for London  
Water Recycling SRO

### **Notice – Position Statement**

This document has been produced as the part of the process set out by RAPID for the development of the Strategic Resource Options (SROs). This is a regulatory gated process allowing there to be control and appropriate scrutiny on the activities that are undertaken by the water companies to investigate and develop efficient solutions on behalf of customers to meet future drought resilience challenges.

This report forms part of suite of documents that make up the 'Gate 2 submission.' That submission details all the work undertaken by Thames Water in the ongoing development of the proposed SRO. The intention at this stage is to provide RAPID with an update on the concept design, feasibility, cost estimates and programme for the schemes, allowing decisions to be made on their progress.

Should a scheme be selected and confirmed in the Thames Water final Water Resources Management Plan (WRMP), in most cases it would need to enter a separate process to gain permission to build and run the final solution. That could be through either the Town and Country Planning Act 1990 or the Planning Act 2008 development consent order process. Both options require the designs to be fully appraised and, in most cases, an environmental statement to be produced. Where required that statement sets out the likely environmental impacts and what mitigation is required.

Community and stakeholder engagement is crucial to the development of the SROs. Some high-level activity has been undertaken to date. Much more detailed community engagement and formal consultation is required on all the schemes at the appropriate point. Before applying for permission Thames Water will need to demonstrate that they have presented information about the proposals to the community, gathered feedback and considered the views of stakeholders. We will have regard to that feedback and, where possible, make changes to the designs as a result.

The SROs are at a very early stage of development, despite some options having been considered for several years. The details set out in the Gate 2 documents are still at a formative stage.

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### **Disclaimer**

*This document has been written in line with the requirements of the RAPID Gate 2 Guidance and to comply with the regulatory process pursuant to Thames Water's statutory duties. The information presented relates to material or data which is still in the course of completion. Should the solutions presented in this document be taken forward, Thames Water will be subject to the statutory duties pursuant to the necessary consenting process, including environmental assessment and consultation as required. This document should be read with those duties in mind.*

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## 1. Overview

### 1.1. Introduction

- 1.1.1. This document is the annex to Section 9 of the Gate 2 submission for the London Effluent Reuse scheme, hereafter called the water recycling scheme, and provides more detailed information on the engagement undertaken with stakeholders and customers to inform the feasibility and conceptual design up to Gate 2. It includes an overview of the engagement activity, the main points of feedback from stakeholders and customers and how they have been considered in the on-going programme of work and development of the solution. It also sets out the issues that need further investigation.
- 1.1.2. We developed our approach to engagement in line with RAPID’s guidance for Gate 2<sup>1</sup>. We have built on the foundation of stakeholder and customer activity completed through Gate 1, the representations made to RAPID on Gate 1 and direct feedback from RAPID and other regulators.
- 1.1.3. It is important for clarity, consistency and efficiency that the engagement activity to inform the development of the SRO is coordinated with dialogue on the regional plans, company Water Resource Management Plans (WRMPs) and company Price Reviews (PR24) Business Plan submissions. The customer and stakeholder engagement activities have been undertaken on that basis, to ensure there is a flow of insight through the process, as illustrated in Figure 1.1.

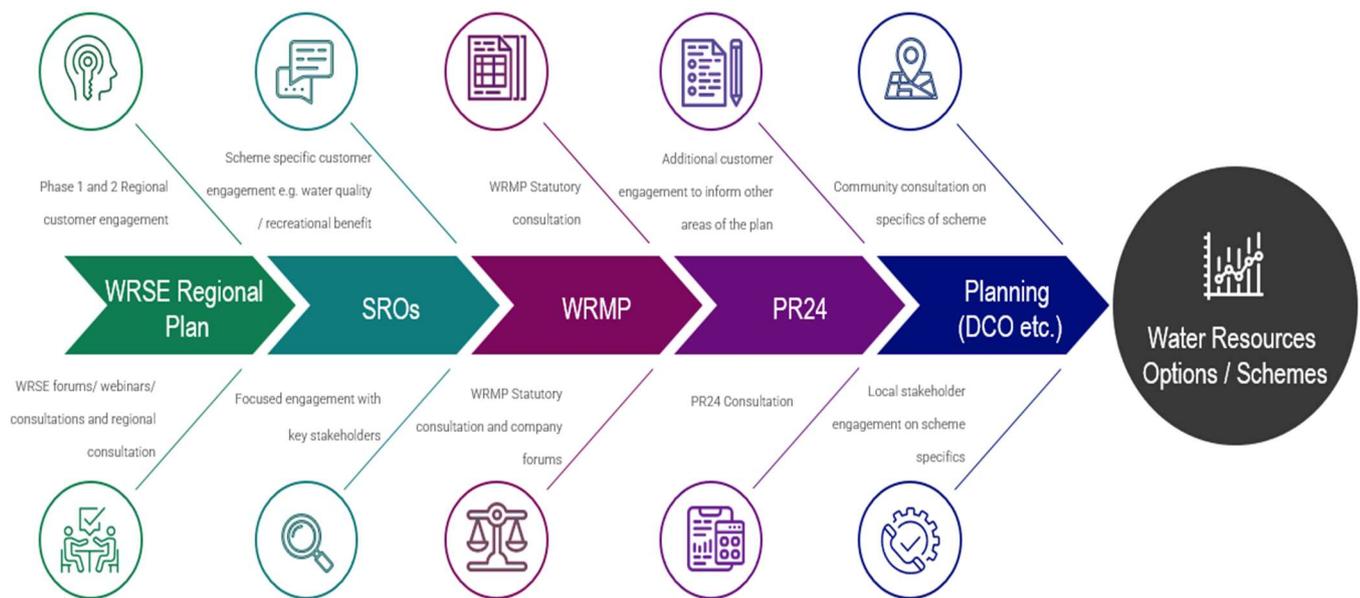


Figure 1.1: Insight flow from customer and stakeholder engagement

<sup>1</sup>[Strategic-regional-water-resource-solutions-guidance-for-gate-two Feb 2022.pdf \(ofwat.gov.uk\)](#).

1.1.4. The structure of this annex is as follows:

- Section 2 presents a summary of our learning from previous engagement with stakeholders which has informed our approach throughout Gate 2.
- Section 3 sets out our approach to engagement with stakeholders, provides an overview of the engagement undertaken and summarises feedback.
- Section 4 describes our engagement with customers to inform the ongoing development of the solution.
- Section 5 sets out the next steps.

## 2. Learning from previous stakeholder engagement

### 2.1. Summary of activity during Gate 1

2.1.1. The stakeholder engagement activity undertaken through Gate 1 was two-fold:

- Activity to inform the development of the south-east (SE) regional plan, to ensure stakeholders understand how London water recycling, and other solutions, fit within the strategic water resource planning framework.
- London water recycling specific discussions focused on legal, regulatory and strategic issues which could prevent the scheme progressing or substantially change the design of the scheme. The engagement was primarily with regulators and strategic stakeholders and designed to be collaborative, with regular progress meetings. This approach facilitated agreement on the scope of the technical studies and methodological approaches.

2.1.2. RAPID published its draft decision on our Gate 1 submission in September 2021, alongside the draft decisions for the other standard SROs. The draft decision determined that good progress had been made for all the assessment areas.

2.1.3. RAPID held a representation period on its draft decision until 8 October 2021. RAPID received three representations on its draft decision. The representations were received from Oxfordshire County Council, Group Against Reservoir Development (GARD) and Port of London Authority (PLA). The representations raised challenges around the transparency of cost estimates, deployable output assessments and stochastic flow data, carbon costs, option capacity, emergency storage and study spend. RAPID responded to the representations in its final decision<sup>2</sup>. A summary of the topics and responses is presented in Table 2.1, alongside our further consideration of the representation.

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<sup>2</sup> [Standard-gate-one-final-decision-for-London-Effluent-Reuse.pdf \(ofwat.gov.uk\)](#)

*Table 2.1: Summary of the main topics raised in representations to RAPID and responses by the Thames Water SRO team*

Topics	Response / action
Transparency in cost estimates	<p>RAPID: Information about solution costs is not material to Gate 1 decisions which is a progress checkpoint. RAPID will provide guidance on presenting and publishing solution costs in their Gate 2 submissions.</p> <p>Thames Water: We are following the guidance set-out in PR19 and developing scheme design in a staged process through the RAPID Gates. We have refined our solution costs for schemes through Gate 2 as our designs and scheme understanding has been developed. Cost information has been provided to WRSE for regional modelling and is provided at Gate 2 in our scheme Cost and Carbon Report (Annex A5). Development of costs has included refinement of costed risk and optimism bias for schemes as well as appropriate benchmarking.</p>
Deployable Output (DO) assessments and stochastic flow data	<p>RAPID: The DO assessment is sufficient at Gate 1. Guidance will be provided for a more detailed examination of DO at Gate 2. Solutions generation of stochastic flow data is expected to follow Water Resources Planning Guideline<sup>3</sup> and supplementary guidance issued by the Environment agency, Ofwat and NRW.</p> <p>Thames Water: We have continued to develop assessments in accordance with the regulatory guidelines. Input data provided by Thames Water has been assured and outputs from regional modelling will reflect latest scheme understanding. Analysis of DO is presented in our concept design reports (Annex A1-A4). Outputs from the SE regional plan are presented in section 8 of our main Gate 2 report.</p>
Carbon costing	<p>RAPID: The information presented on carbon was sufficient for Gate 1. Solution development to Gate 2 should follow the Water Resources Planning Guideline.</p> <p>Thames Water: In-line with guidance from RAPID we have applied a consistent method for carbon costing. Our carbon assessment at Gate 2 uses the PAS 2080<sup>4</sup> approach for whole life assessment and mitigation planning. This is in line with Thames Water's aim to be net zero carbon by 2030. A cost and carbon report is provided in Annex A5.</p>
Mogden source capacity	<p>RAPID: The capacities of options were developed taking into account feasibility, output and environmental assessments, any larger capacity options would be identified and assessed through the regional and company planning process at WRMP24 and an update provided on option capacities at Gate 2.</p> <p>Thames Water: Investigations through Gate 2 have examined the total effluent available from Mogden Sewage Treatment Works (STW) and also the potential impacts associated with discharge of recycled water into the River Thames. The limitations of available effluent and potential impacts on the river is summarised in Section 3 of the Gate 2 report. Further details on the environmental limitations are provided in Annex B2.</p>
Emergency storage	<p>RAPID: Clarification if extra allowance for emergency storage has been made for the London reservoirs to allow for uncertainty in the reuse output</p> <p>Thames Water: We have not undertaken a full reassessment of the DO benefit of water recycling or desalination schemes that could benefit our London WRZ for WRMP24, and have based our DO assessment on the assessments completed for WRMP19. This is due to the computational effort required in undertaking a 'full stochastic' DO assessment, and due to the assumed constant output of recycling and desalination schemes during drought (i.e. the DO benefit of these schemes is not</p>

<sup>3</sup> [Water Resources Planning Guideline, EA, Ofwat and NRW, July 2021](#)

<sup>4</sup> [Guidance-Document-for-PAS2080\\_vFinal.pdf \(constructionleadershipcouncil.co.uk\)](#)

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Topics	Response / action
	<p>particularly impacted by hydrological conditions). We have focussed our DO modelling effort on other schemes which have DO benefits which are more driven by hydrology, following a 'tiered' approach set out in the WRSE method statement. We have, however, amended the WRMP19 DO benefit calculated to align assumptions with revised baseline DO assumptions (removal of demand savings from the calculation of DO).</p> <p>Our WRMP19 DO assessment for all large options, including recycling schemes, included a 'Dynamic Level 4', moving our Level 4 control curve with the demand applied in the model. In this case our model always ensures an emergency allowance of 30 days' worth of reservoir throughput, and so with the increased DO that a recycling plant would bring there would be an additional emergency storage allowance made.</p>
Spend	<p>RAPID: It was advised that funding allowance that had not been used at Gate 1 could be made available for Gate 2 activities</p> <p>Thames Water: We welcome the approach adopted by RAPID to enable robust and complete assessments by carrying over underspend to future Gates.</p>

2.1.4. RAPID published its final decision<sup>5</sup> in December 2021 and included six actions and five recommendations. The actions and recommendations are presented in Tables 2.2 and 2.3 respectively with signposting to where these points have been addressed in the Gate 2 submission.

*Table 2.2: RAPID Gate 1 Final decision - Actions to be addressed in Gate 2 submission*

Action - Detail	Response and signpost
1 Develop utilisation figure to be determined by regional modelling and to consider impacts of in-combination effects.	<p>Work at Gate 2 examined the frequency and duration of scheme operation with Pywr modelling and development of operational philosophy including stand-by modes. This information is presented in each scheme concept design report (Annex A1-A4).</p> <p>Consideration of in-combination impacts have been reported in our Initial Environmental Assessment report (Annex B5) and follows the All Company Working Group (ACWG) methodology prepared for Gate 2.</p>
2 Use outcomes from the regional modelling to determine drought resilience.	Output from the draft SE regional model demonstrates resilience to droughts against a range of modelled stochastic drought scenarios. This is presented in section 4 of the Gate 2 report.
3 Ensure a best value analysis, following relevant guidelines and including environmental/social/economic costs, is undertaken and presented for all of the sub-options within this SRO.	Best value assessments are in line with the "Water Resources Planning Guideline" and Ofwat's "Public value in the water sector: A supporting set of principles (July 2021)". This is supplemented with information from the regional modelling which incorporates a variety of best value metrics to ensure consistency in all assessment outputs. A summary of the regional modelling outputs can be found in section 8 of our Gate 2 submission.

<sup>5</sup> [Standard-gate-one-final-decision-for-London-Effluent-Reuse.pdf \(ofwat.gov.uk\)](#)

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Action - Detail	Response and signpost
4 Review the scope of environmental impacts and ensure engagement with regulatory partners to identify where mitigation can be built into solution design.	Technical engagement has continued with regulators to share the approach, scope, modelling outputs and assessments. Where the risk of significant impacts has been identified mitigation has been proposed. This has either been embedded within the design or included as additional mitigation in assessments. In some instances where impacts are deemed too high then we have recommended amendments to the size options of schemes (Section 3 of our Gate 2 report) or written to RAPID mid-gate to remove options <sup>6</sup>
5 Review the scope of any future statutory Strategic Environmental Assessment (SEA) to agree objectives and recommendation additions/subtractions (for example, the guide questions in SEA focus on reducing carbon emissions and the longevity of the option, and less so on the impacts on the environment in light of climate change).	We prepared a bespoke approach to impact assessment for Gate 2 which goes beyond the SEA approach adopted at Gate 1. This approach, called Initial Environmental Appraisal (Annex B5), supports the work required for a formal SEA within the WRMP but also advances the understanding of specific impacts from schemes for Gate 2 and allows future EIA scoping of a scheme to be more robust with less uncertainty in the identification of pathways to effects.
6 Update environmental annexes to reflect comments and agreed actions as a priority, including consideration of Swanscombe Marine Conservation Zone (MCZ) in the SEA.	Gate 2 work has taken into consideration all comments made by the National Appraisal Unit (NAU) and stakeholders at Gate 1. The approach and scope of work undertaken through Gate 2 has been shared with the NAU, Environment Agency (EA) and Natural England (NE) and feedback incorporated into the work completed and reports prepared as part of our Gate 2 submission. Specifically, we have provided a screening assessment of the Swanscombe MCZ (Annex B7) at Gate 2.

*Table 2.3: RAPID Gate 1 Final decision – Recommendations to be addressed in Gate 2 submission*

Recommendation - Detail	Response and signpost
1 Produce a detailed stakeholder engagement plan, including identification of wider / local stakeholders.	<p>We have built on our Gate 1 engagement and developed a stakeholder plan that identified the key stakeholders who we engaged with through Gate 2 and prior to any public consultation on the outputs of the draft regional plan. Our engagement plan, summarised in Table 3.2, includes the identified stakeholders, the approach of engagement and key areas and topics for engagement.</p> <p>Through Gate 2 we have focussed stakeholder engagement in two areas; through the regional planning process and specific technical engagement of water recycling schemes. We also completed customer engagement.</p>
2 Further consider social and amenity value, if this is limited due to type of solution, this can be explained in the submission.	We consider social and amenity value throughout our environmental reports, specifically within our Biodiversity Net Gain and Natural Capital Assessment report (Annex B6). We have also completed work with customers to seek their preferences on public value, this is presented in Appendix D.5 to this annex.

<sup>6</sup> [Thames-Water-letter-to-RAPID-Beckton-pipeline-route-rejection-version2.1.pdf \(ofwat.gov.uk\)](#)

Recommendation - Detail	Response and signpost
<p>3 Carry out a detailed assessment of inter-dependencies and in-combination impacts with other SRO and non-SRO options, including Deephams water recycling, following outputs of regional modelling.</p>	<p>Through the ACWG an in-combination methodology has been prepared and has been applied to understand potential cumulative impacts between SROs and other developments that might interact with schemes. This assessment is presented in the Initial Environmental Appraisal report (Annex B5)</p>
<p>4 Explain how Thames Water will seek to influence the supply chain to reduce scope 3 carbon emissions and outline how the root cause of the issues ties in with the SRO behaviour change/consumption/wastewater disposal etc</p>	<p>Our carbon assessment at Gate 2 uses the PAS 2080<sup>7</sup> approach for whole life assessment and mitigation planning. This is in line with Thames Water's aim to be net zero carbon by 2030. We aim to provide a project that is compatible with the budgeted science-based UK trajectory, and which complies with up-to-date policy and good practice reduction measures. A cost and carbon report is provided in annex A5.</p>
<p>5 Particular attention should be paid to the recommendations and learning from previous DWI events where effluent discharge impacted on drinking water supplies.</p>	<p>We have worked closely with RAPID through Gate 2 to understand concerns in relation to changes to drinking water supplies. We have undertaken research with customers to understand attitudes towards water recycling and changes to their drinking water supplies. This work is presented in this section 4 of this annex and its associated appendices. As work continues towards delivering schemes aligned to the SE regional plan TW will ensure lessons learnt within the industry are captured and reflected in future engagement around changing water sources and the engagement and communication with customers.</p>

### 2.2. Shaping the scope of Gate 2

- 2.2.1. We reviewed, and took account of, the feedback received from regulators and stakeholders, to ensure we had a robust understanding of issues and concerns, as well as opportunities, and this information informed the work programme and the engagement activities held through Gate 2.
- 2.2.2. We shared draft Gate 1 reports with the NAU and received a number of comments which we either addressed in our Gate 1 submission or developed a forward action plan to address in Gate 2. These Gate 2 commitments, listed in the Gate 2 scoping report (Annex B1, section A1), together with early engagement with the NAU and other stakeholders enabled us to develop proportionate scopes of work to develop schemes, investigate potential scheme impacts with more certainty and develop mitigations measures where required.
- 2.2.3. We also ensured feedback from stakeholders through Gate 2 was considered and where required scopes were amended or new work introduced to address any emerging concerns, such as:
- Inclusion of a suite of emerging substances and PFAS analysis in the water quality programme in response to feedback from DWI.

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<sup>7</sup> [Guidance-Document-for-PAS2080\\_vFinal.pdf \(constructionleadershipcouncil.co.uk\)](https://www.constructionleadershipcouncil.co.uk/Guidance-Document-for-PAS2080_vFinal.pdf)

- Amendments to the eDNA smelt sampling programme to include analysis for shad in response to EA comments.
- More detailed terrestrial ecology assessments to prepare site Preliminary Ecological Appraisals (PEAs) from UK habitat surveys in response to outputs from the SE emerging plan.
- Further modelling to investigate maximum scheme capacity and refinement of options based on quantitative modelled evidence in response to EA challenge.
- Additional Tideway modelling to include Tideway tributary contributions in response to EA comments.
- Further investigation into scheme operational modes in response to RAPID and NAU challenge.
- Research with Thames Water customer panel on potential future changes to water sources with customers in London who could potentially have their water supplied from a water recycling plant in times of drought in response to RAPID comments.

2.2.4. We also had regard to the outputs of the SE emerging plan, which was consulted on early in 2022 (see section 3). The outputs of the emerging plan shaped our ongoing work allowing us to focus on schemes most likely to be selected in the regional plan.

## 3. Engagement with stakeholders

### 3.1. Overview

3.1.1. Our engagement activity through Gate 2 built on previous engagement, taking account of issues and concerns raised by stakeholders, and was designed to:

- fit within the regulatory process established under the guidance of RAPID; and
- coordinate with regional and company strategic water resource planning activity to ensure a clear and joined-up approach for stakeholders.

3.1.2. The engagement approach through Gate 2 consisted of:

- activity to inform the development of the SE regional plan to ensure customers and stakeholders understood the approach, the planning challenge, the range of solutions identified and considered and how London water recycling, and other SROs, fit within the strategic planning framework
- technical engagement with regulators and stakeholders on the scheme-specific issues working collaboratively, to develop the feasibility assessments and conceptual designs.

### 3.2. Engagement as part of the developing SE regional plan

3.2.1. Water Resources South East (WRSE) is working closely with the six water companies in the south-east region<sup>8</sup>, and the wider stakeholder community, to develop a resilient water plan for the region. The regional plan will be reflected in the SE water companies

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<sup>8</sup> Affinity Water, Portsmouth Water, SES Water, SE Water, Southern Water, Thames Water

statutory WRMP24 and the schemes included in the preferred SE regional plan will be included in the company's WRMP24s in a consistent and aligned manner. It is therefore important that stakeholders have an awareness of, and understand, the overall strategic planning process, the key decision points, and opportunities to contribute.

- 3.2.2. Engagement has been, and continues to be, a thread throughout the development of the regional plan. The engagement involves a wide range of water users – customers, businesses, other sectors and stakeholders – and aims to understand their priorities and preferences, and to take these into account in decisions leading to the draft regional plan.
- 3.2.3. WRSE, and the member companies, have endeavoured to work openly and transparently, sharing information in a timely way, and across a range of channels and activities, to enable participation and ensure stakeholders are clear about why they are being consulted, the scope of the consultation and how that fits with the wider water resources planning landscape.
- 3.2.4. WRSE has established stakeholder groups<sup>9</sup> to help guide the development of the plan. The groups are the stakeholder advisory board, environmental stakeholder group and the multi-sector stakeholder group. These groups meet regularly and minutes of meetings are published to ensure open and transparent working.
- 3.2.5. In addition to these specific groups, WRSE has proactively engaged with the wider stakeholder community through meetings, webinars and consultations throughout the development of the SE regional plan. Thames Water has continued to jointly host a regular Water Resources Forum to give stakeholders the opportunity to keep up to date, and contribute to, the discussions on the long-term planning.
- 3.2.6. In addition WRSE has strong links with other regional groups to ensure the opportunities to share resources effectively are understood and fully investigated and to ensure a coordinated national water resources picture.
- 3.2.7. The WRSE engagement and consultation programme is hosted on a dedicated engagement platform ([wrse.uk.engagementhq.com](http://wrse.uk.engagementhq.com)) and has three main phases:
  - **Plan and prepare** – To 2020 the focus was on the “building blocks” of the plan. This included the development of the technical methods, approaches and tools that would be applied in the development of the plan for example the forecasts for future growth and demand for water; the environmental assessments; as well as the regional policies for the region. WRSE ran a programme of webinars and held topic specific consultations to give stakeholders the opportunity to engage and input to the process.
  - **Develop** – During 2021 the focus broadened and set out the planning challenge for the region, shared information on feasible solutions, including the SROs, and the approach to determine the best value plan.
  - **Consult and update** – During 2022 the focus moved to the plan itself. WRSE held an 8-week period of engagement and consultation on the emerging plan. In the autumn

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<sup>9</sup> Visit [Home | WRSE - Water Resource South East](#) to read more about WRSE led stakeholder engagement and access meeting minutes and relevant documentation.

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a further round of consultation will be undertaken on the draft plan, alongside the statutory consultation on the draft WRMP24s.

- 3.2.8. WRSE produced a Stakeholder Engagement Report which summarised the extensive engagement and consultation activity that has taken place to date. The report was published alongside the emerging plan in January 2022. Appendix D.1 of this report provides a summary of the engagement completed to date to support the development of the SE regional plan.
- 3.2.9. The engagement and consultation on the emerging regional plan took place between January and March 2022. The emerging plan gave early sight of the big issues and emerging solutions to gain initial feedback from stakeholders. As well as publishing documents for review and comments, a series of online workshops were held for stakeholders to provide an overview of the plan, the work to date and further work planned to transition to a best value plan.
- 3.2.10. WRSE, and the SE water companies, proactively raised awareness of the consultation on the emerging plan and took a range of actions to explain the plan and encourage wide participation. The activities included:
- Pre-briefings with a number of organisations including Council for Protection of Rural England (CPRE, now known as The Countryside Charity), National Farmers Union (NFU), National Infrastructure Commission (NIC), Blueprint for Water and Consumer Council for Water (CCW).
  - Meetings with Group Against Reservoir Development (GARD) to discuss their technical challenges.
  - Proactive engagement with the media to ensure clear and balanced reporting.
- 3.2.11. WRSE, and SE water companies, received 10 requests for technical data and information from GARD. These requests included information on abstraction licences, stochastic river flow data, scheme deployable output data and cost data. These data requests were treated as Environmental Information Requests (EIR) by Thames Water in view of the detailed nature of the information requested. Thames Water, in collaboration with WRSE and other SE water companies, collated and provided the data, where this was available, in line with EIR requirements and timetable. Thames Water also held a meeting with GARD's technical advisor to review the information requests to ensure there was a complete understanding of what information could be provided and what information could not be provided and the reasons for this.
- 3.2.12. WRSE received over 1,150 written responses to the consultation. Figure 3.1 provides a summary of the facts and figures regarding the consultation on the SE emerging plan while Table 3.1 provides the high-level response to the water recycling themes raised. Over half of the individual responses to the consultation on the emerging plan focused on specific water resources options identified for development, such as large new reservoirs, strategic water transfers, and water recycling schemes.

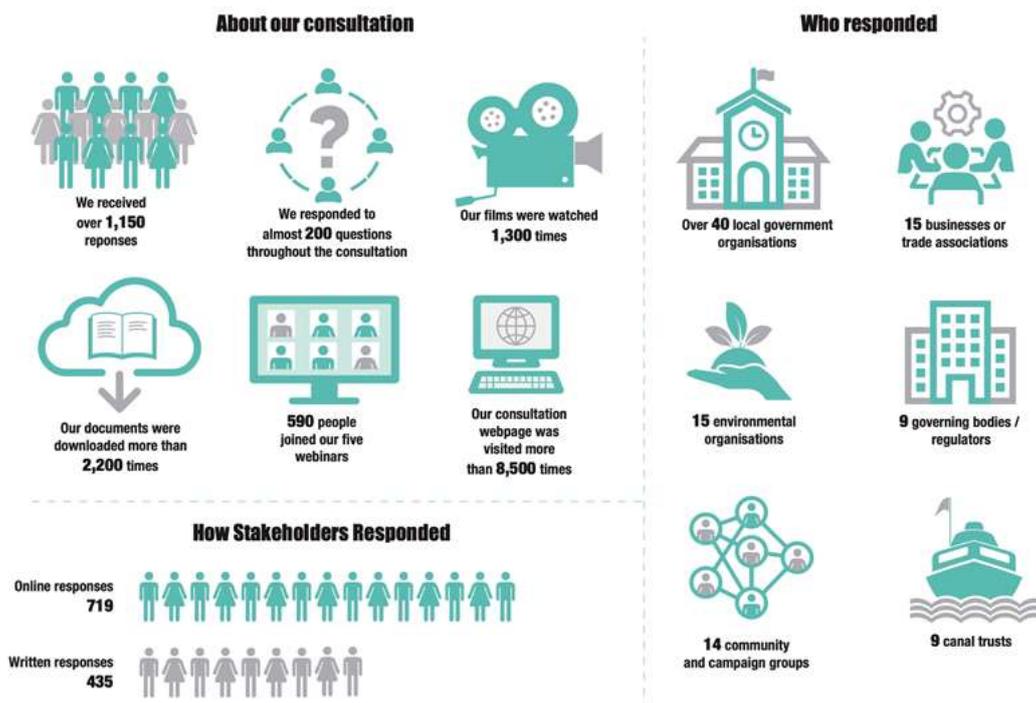


Figure 3.1 The facts and figures from consultation on the SE emerging plan

3.2.13. WRSE published a response document<sup>10</sup> in May 2022 which provided a summary of the consultation responses, highlighted the main themes and issues raised in the responses and provided WRSE’s consideration of the points and resultant action.

3.2.14. The main comments raised in the consultation on the emerging plan in relation to water recycling were:

- DWI highlighted that resource schemes such as water recycling can introduce risks associated with treatment, including the challenge of remineralisation, blending (and associated changes to taste or feel), existing and emerging contaminants, and potential network impacts from corrosivity, all of which need to be appropriately assessed.
- Financial cost and carbon impacts of water recycling.
- The potential for environmental impacts associated with the construction and operation including the disposal of waste products and resulting water quality and more specific detail of the environmental assessments of those options, and ways in which any temporary and permanent impacts could be mitigated.
- The need for water recycling to be ‘always on’, albeit at reduced capacities, with consequential carbon and other impacts.

<sup>10</sup> WRSE Emerging Regional Plan: Consultation Response Document, May 2022

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- A lack of detailed information on carbon, and measures to achieve net zero, including carbon offsetting, was seen as a weakness, especially in the context of the climate emergency.
- Some considered that water recycling (and desalination) should be options of 'last resort' in the plan, whereas others considered them to represent secure solutions that would be resilient to drought.
- Assurances were sought that water recycling options would not result in water quality or other implications for nearby or downstream abstractors.
- The potential for co-location of renewable energy.

3.2.15. The representations and points raised in relation to London water recycling were considered by the project team and taken into account in the ongoing work with signposting to the relevant sections of the Gate 2 submission, presented in Table 3.1.

**Table 3.1: WRSE emerging plan representations on water recycling and the relevant section of the Gate 2 submission**

Topics raised	Gate 2 signposting
Water quality - risks associated with treatment and remineralisation, blending (and associated changes to taste or feel)	The drinking water safety plans for schemes are presented in Annex C and summarised in Section 5 of the Gate 2 report
Financial costs	Scheme cost information is presented in Section 8 of the Gate 2 report with further detail set-out in Annex A5.
Environmental impacts – Both construction and operational impacts including the disposal of waste products plus more specific detail of the environmental assessments and mitigation opportunities	Environmental appraisals are presented in Annexes B2-B7. These assess all pathways, from construction and operational effects from each water recycling scheme. Where required mitigation is proposed to reduce any significant effects.
Water quality - existing and emerging contaminants	Water quality analysis is presented in Annex B2 with the data used in our impact assessments (B3, B4, B5) and drinking water safety plan (Annex C).
Network impacts and corrosivity	Scheme design elements are captured in our concept design reports (Annex A1-A4)
Operation of the scheme - The need for water recycling to be 'always on', albeit at reduced capacities, with consequential carbon and other impacts.	Scheme design elements are captured in our concept design reports (Annex A1-A4).
Carbon assessments and measures to achieve net zero	Our carbon assessment is reported in Annex A5 for each scheme.
Consideration of nearby or downstream abstractors	Our in-combination assessments consider other projects and is reported in our Initial Environmental Appraisal report - Annex B5.

Topics raised	Gate 2 signposting
Potential for renewable energy generation nearby	Potential for renewable energy generation is considered in our Natural Capital Report - Annex B6.

### 3.3. Scheme-specific engagement

3.3.1. We developed a stakeholder plan to identify key stakeholders. This included political stakeholders, local planning authorities and wider stakeholders who could potentially have an interest in the schemes.

3.3.2. The engagement activities were embedded throughout the Gate 2 programme of work; building on the Gate 1 engagement with regulators and strategic stakeholders and expanded to include local planning authorities and other selected stakeholders.

3.3.3. Table 3.2 summarises our stakeholder engagement plan. It includes the stakeholder, the engagement approach as well as their main points of interest and how these were considered and taken into account in the work programme during Gate 2.

*Table 3.2: Overview of specific SRO engagement embedded in our engagement plan*

Stakeholder	Engagement approach	Points of interest and resulting action
Environment Agency (EA) incorporating the NAU	Technical discussions involving the scope and approach to ongoing investigations, the sharing of results and assessment findings relating to the SRO	Monthly programme management progress meetings from September 2021 to provide an update on progress, collaborative working and share new information.
Natural England (NE) incorporating the NAU		<p>Topic based Technical Working Groups (TWGs) with specialists to examine the development of key areas. These included:</p> <ul style="list-style-type: none"> <li>• Engineering design</li> <li>• Terrestrial ecology and Biodiversity Net Gain (BNG)</li> <li>• Fisheries</li> <li>• Water quality (WQ)</li> <li>• Hydraulic and WQ modelling</li> <li>• Aquatic ecology</li> <li>• Regulatory Assessments (Habitats Regulations Assessment (HRA), WFD and IEA)</li> <li>• Temperature</li> <li>• Flood risk</li> </ul> <p>Meetings were set up to align with the availability of Gate 2 information and to ensure regular engagement and collaborative working with opportunities to comment on scopes and approach of investigations, outputs, and assessment findings. Feedback was taken into account in the technical work.</p>
Drinking Water Inspectorate (DWI)	Engagement at key milestones to ensure compliance with drinking water quality legislation and ensuring water quality risks are properly assessed and evaluated.	<p>Pan SRO meeting held September 2021 to discuss emerging substances monitoring requirements. A dedicated DWI TWG was set up to discuss and agree emerging substances programme in response to identification of this as an issue to discuss.</p> <p>DWI were invited to provide feedback on our customer research work for water recycling (see section 4) and we</p>

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Stakeholder	Engagement approach	Points of interest and resulting action
	Engagement in the design of customer research on water recycling	<p>offered the opportunity to observe the field work and share outputs.</p> <p>Meeting held in May 2022 to review progress with drinking water quality risk assessment for London water recycling schemes.</p> <p>The DWI were issued the drinking water safety plans for schemes in September 2022 for comments.</p>
Port of London Authority (PoLA)	Technical engagement over key issues flagged at Gate 1 to include changes to water levels and potential aquatic and navigation impacts	<p>Progress meeting held in December 2021 and January 2022 to provide latest developments within the SRO since Gate 1 submission.</p> <p>PoLA were invited to all relevant TWGs held with the NAU, EA and NE.</p> <p>Site visit undertaken with PoLA to Richmond Lock in February 2022 to understand key concerns around navigation and half-sludge and lock operations.</p> <p>Dedicated meeting held May 2022 to discuss navigation, in response to PoLA concerns, and provide an overview of water level changes anticipated and identify key areas of focus for the Gate 2 navigational assessment.</p>
RAPID (Ofwat/DWI/EA)	Regular engagement on progress to determine appropriateness of work activities against the Gate 2 guidance	<p>Fortnightly liaison meetings.</p> <p>Quarterly liaison meetings with Thames Water.</p> <p>Check-in call with RAPID held Dec 21, Feb 22, May 22 and July 22 to share latest developments, progress with SRO and share forward actions.</p> <p>Site visit to Mogden STW and Teddington area with RAPID in September 2022.</p>
ACWG	Regular engagement to align guidance across SROs	<p>Development of guidance documents for example Design Principles and in-combination assessments.</p> <p>A Design Principles working group was established for cross SRO development and input. Meetings were held through Sept 21 – March 22.</p>
Local planning authorities (LPAs)	Planning led engagement on schemes within the SRO	High-level introductory meeting with each local authority, tailored to cover their interaction with a scheme. Meetings held through May and June 2022 captured feedback and established future protocols for planning engagement once the need and timing of a scheme is understood. The feedback is presented in Table 3.4.
GLA	Initial briefing on London water recycling as part of a wider TW briefing on strategic water issues	Discussion session held (June 2022) with the GLA climate change team which included information on the work to develop the strategic water resources plan and the SROs. There were no specific issues raised in relation to the water recycling SRO.
Water companies	Engagement to explore shared learning and experience and	Active engagement to share knowledge and identify differences in approach with Southern Water, Severn Trent Water and Anglian Water. Topics include terminology;

## Annex D: Stakeholder and Customer Engagement

Stakeholder	Engagement approach	Points of interest and resulting action
	explore a range of parietal solutions for future water supply	treatment technology; monitoring programme in respect of sample locations and determinands and regulatory requirements.  Fortnightly calls to seek consistency in approach through Gate 2
Thames Water teams (water quality, capital delivery, wastewater)	Provide updates on progress and explore synergies and opportunities	Regular engagement to share scheme developments and explore any synergies. This engagement resulted in sharing of existing ecology reports and exploring the potential joint benefit of recycling schemes.
Historic England	Engagement on archaeology and cultural heritage matters	A meeting was held in October 2022.
CCW	Engagement on the research undertaken with customers covering both the approach and shared the outputs. This includes the WRSE-led research, CCW is part of WRSE's regional Customer Challenge Group (CCG) and the SRO "club" research.	The focus of our engagement with CCW has been on the work to understand customer concerns and preferences (see section 4). We engaged with CCW on the scope and approach for the research and took account of their feedback. We also offered the opportunity to observe the field work and shared the output of the studies and welcomed further feedback.
Wider stakeholder community	There is wide interest in long-term water resource planning from a range of perspectives, to ensure resilience of supply, opportunities to protect and improve the environment as well as interest in specific schemes.	Thames Water hosts a Water Resource Forum, jointly with Affinity Water, to provide information and opportunity to input on the development of the regional water resources plan and company activity.  Focused activity on options was held in November 2021 to give stakeholders the opportunity to understand the solutions being considered for WRMP24 and for the South-East Regional Plan with updates provided at Forums held during 2022.

3.3.4. Two key engagement processes were established through Gate 2; the establishment of topic specific workshops or meetings (Technical Working Groups (TWGs) or standalone technical discussions); and activity to support wider scheme promotion and understanding of scheme design.

### Technical engagement

3.3.5. Technical meetings and workshops were held through Gate 2 to discuss scopes of work, develop methods and ensure consistent approaches were adopted across SROs. In addition, a number of TWGs were established at the beginning of Gate 2 for the purpose of sharing technical information and collaborative working with regulators who have specialist knowledge or a defined stake in a particular topic. The activity in the TWGs has included sharing data, discussion and agreement on the scope of work and methodologies for technical assessment, review and challenge of outputs. In most cases the TWGs were made up of the NAU, EA and NE where a terms of reference had been shared.

3.3.6. Table 3.3 presents a timeline of technical engagement through Gate 2 and the main topics of discussion.

Table 3.3: Technical engagement log

Date	Meeting	Members	Agenda / Discussion topic
<b>2021</b>			
Sept (21)	DWI workshop	EA, NAU, Ofwat, RAPID, DWI, Thames Water	Pan TW SRO workshop on emerging substances monitoring
Sept (29)	ACWG design principles kick-off workshop	Pan SRO teams, water companies, design council, WRSE, RAPID	Introduction to the development of design principles for SROs
Sept (29)	NAU Gate 2 kick-off	NAU PM, Thames Water	Approach to Gate 2 engagement activities, programme and TWGs
Oct (5)	WRSE coordination meeting (1)	WRSE, Pan SRO teams, water companies	Progress update and forward action plan for data updates to inform future regional modelling
Oct (18)	ACWG design principles - workshop (1)	Pan SRO teams, water companies, design council, WRSE, RAPID	Share information on policy and precedent studies. Present draft principles and key themes Stakeholder mapping
Oct (26)	NAU TWG - WQ modelling (1) and Temperature (1)	NAU, EA, NE	Recap on work completed and results from G1 Scope and approach of modelling for G2 Applicable and relevant legislation to use in assessments
Nov (17)	ACWG design principles - workshop (2)	Pan SRO teams, water companies, design council, WRSE, RAPID	Share information and feedback on draft principles and key themes Development of Gate 2 indicators
Dec (2)	National system simulation modelling - phase 1 workshop	Pan SRO teams, water companies, WRSE, RAPID, NAU, EA, Ofwat >25 participants	Workshop on the national system simulation model
Dec (7)	NAU TWG - Terrestrial ecology (1)	NAU, EA, NE	Recap on work completed and results from G1 Scope and approach for G2
Dec (8)	NAU TWG - Other aquatic environment (1)	NAU, EA, NE	Recap on work completed and results from G1 Scope and approach for G2
Dec (10)	NAU TWG - WQ modelling (2)	NAU, EA, NE	Scope and approach of modelling for G2 Outputs and programme
Dec (13)	ACWG design principles - workshop (3)	Pan SRO teams, water companies, design council, WRSE, RAPID	Review and agree final ACWG design principles, targets and indicators.
<b>2022</b>			
Jan (7)	NAU TWG - Temperature (2)	NAU, EA, NE	Scope and approach of modelling temperature Modelling scenarios to be used Applicable and relevant legislation to use in assessments
Jan (12)	ACWG design principles - evaluation	Pan SRO teams, water companies,	Feedback and evaluation of work completed Next steps

## Annex D: Stakeholder and Customer Engagement

Date	Meeting	Members	Agenda / Discussion topic
		design council, WRSE, RAPID	
Jan (12)	NAU TWG - Fisheries (1)	NAU, EA, NE	Recap on Gate 1 finding and forward actions Scope of survey activities for Gate 2 Evidence based to be used at Gate 2 Assessment approach
Jan (20)	NAU TWG - WQ modelling (3)	NAU, EA, NE	Evidence-base for Gate 2 assessment Finalisation of Gate 2 scope Formats and examples of outputs
Jan (25)	NAU TWG - WQ monitoring (1)	NAU, EA, NE	Evidence-base for Gate 2 assessment Formats and examples of outputs
Jan (31)	PLA kick off meeting for Gate 2	PLA	Recap on Gate 1 findings and forward actions Approach to Gate 2 Key developments to date
Feb (25)	Richmond lock site visit	PLA, NAU	Visit Richmond lock to discuss concerns over integrity with changes in water level
March (2)	NAU TWG - Other aquatic environment (2)	NAU, EA, NE, PLA	Evidence-base for assessments Findings from Gate 2 surveys
March (7)	NAU TWG - Terrestrial ecology (2)	NAU, EA, NE	Evidence-base for assessments Findings from Gate 2 surveys
March (8)	NAU TWG - Engineering design	NAU, EA, NE, PLA	Introduction to the engineering design, site layouts, infrastructure, conveyance corridors and operational philosophy
March (10)	NAU TWG - Fisheries (2)	NAU, EA, NE, PLA	Evidence-base to be used at Gate 2 Assessment approach
March (23)	NAU TWG - WQ modelling (4)	NAU, EA, NE, PLA	Early Gate 2 modelling results
March (30)	ACWG design principles -Phase 2 workshop	Pan SRO teams, water companies, design council, WRSE, RAPID	Introduce draft user guidance Identify gaps Share best practice on project specific vision and principles
April (19)	NAU TWG - WQ (1)	NAU, EA, NE, PLA	Evidence-base for Gate 2 assessment Gate 2 results and findings
April (27)	NAU TWG – Temperature (3)	NAU, EA, NE	Overview of modelling scenarios used in Gate 2 Temperature modelling result for Teddington and Mogden (3D fluvial work)
May (4)	NAU TWG - HRA (1)	NAU, EA, NE	Recap on Gate 1 findings and forward actions Summary of approach to work for Gate 2 Key areas of focus for HRA at Gate 2
May (10)	NAU TWG - Engineering design (2)	NAU, EA, NE	Engineering design focus on operational philosophy reuse system process and implications and mitigation measures

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Date	Meeting	Members	Agenda / Discussion topic
May (13)	NAU TWG – WQ (2)	NAU, EA, NE	Overview of AWRP discharge qualities Update on the WFD physico-chemical assessments Update on chemicals and olfactory assessments
May (19)	Navigation	PLA	Overview of key Tideway model outputs, including water level and sediment. Agreement on key areas of focus for the navigation assessment
May (24)	NAU TWG – Terrestrial ecology (2) and BNG (1)	NAU, EA, NE	Presentation on BNG metrics and site selection criteria Example model outputs Overview of next steps
May (26)	DWI - Drinking water safety plan workshop	DWI, RAPID	Presentation of DWSP and risk assessment for London Reuse
June (13)	NAU TWG - Temperature (4)	NAU, EA, NE	Example of 1 in 5-year scheme operation and impact on temperature Review of Mogden 100 and 150 MI/d scheme modelled temperature contour plots Review of Teddington DRA 100 and 150 MI/d scheme modelled temperature contour plots
June (20)	NAU TWG physical environment	NAU, EA, NE	Overview of physical environment assessment outputs and findings
June (21)	NAU TWG – WQ (3)	NAU, EA, NE	Overview of water quality assessments outputs and findings
June (22)	NAU TWG – WQ modelling (2)	NAU, EA, NE	Overview of tideway modelling outputs for water level, temperature, salinity and sediment in the Tideway
Sep (9)	Site visit	RAPID & NAU	Site visit to Mogden STW and Teddington river bank

### Wider scheme engagement

- 3.3.7. Our approach to wider scheme engagement has been tailored to the stakeholders and their areas of interest.
- 3.3.8. We have engaged with 10 local planning authorities (LPAs) through May and June 2022, the approach comprised two parts; firstly an introduction to the SRO, RAPID’s gated process and expectations, and the role of WRSE, regional modelling and its inter-dependencies with development of the need case for a scheme. The second part, focussed on scheme specifics and allowed each LPA to understand how a scheme would interact within its, and neighbouring, authority boundaries and the potential construction and operation impacts of a scheme.
- 3.3.9. Formal comments and responses were not sought from the LPA at this stage, nor were detailed reports or information provided to the LPA for their review. Table 3.4 provides a summary engagement log with more detailed information included in Annex G (Planning and Land Strategy).

Table 3.4: LPA engagement log

Scheme	LPA	Agenda	Response themes
Beckton water recycling scheme	Newham	Preliminary session to set-out context of water recycling and introduce the Beckton scheme	LPA shared preliminary information about future planning constraints and challenges that a scheme is likely to face. Keen to engage early once scheme need has been identified.
	Barking & Dagenham		LPA shared preliminary information about future planning constraints and challenges that a scheme is likely to face. Keen to understand the possibility of local job opportunities including skills and apprentices.
	Redbridge		Keen to understand the possibility of local job opportunities including skills and apprentices. Keen for early engagement once the need is identified Need to develop a carefully considered consultation approach.
	Waltham Forest		LPA shared preliminary information about future planning constraints and challenges that a scheme is likely to face. LPA wants to engage early.
	Haringey		LA keen to understand approach to tunnelling, including depths and potential for noise and vibration impacts on the surface.
	Enfield		LPA wants to explore scheme design further including design principles and rationale of site selection. Shared information about local redevelopment of key areas along conveyance route and future potential challenges.
Teddington DRA	Hounslow	Preliminary session to set-out context of water recycling and introduce the Teddington scheme	Explored potential for construction impacts under residential properties from pipejacking and would need to be addressed in future scheme engagement and application. LA run a design panel which it advised should be utilised during pre-application. Early engagement with local communities critical.
	Richmond upon Thames		Potential issues raised around development on MOL and green belt. Local groups have successfully challenged developments in the area previously. Early engagement critical with local communities
	Kingston upon Thames		Keen to understand job opportunities from a scheme and benefits to the area. Discussed customer attitudes to water recycling. LPA keen to be involved with design principles once need identified.
Mogden schemes	Hounslow	Preliminary session to set-out context of water recycling and introduce the Mogden schemes	Explored potential for construction impacts under residential properties from pipejacking and would need to be addressed in future scheme engagement and application. LA run a design panel which is advised should be utilised during pre-application.

Scheme	LPA	Agenda	Response themes
			Early engagement with local communities critical Keen to understand more about BNG and how it would be addressed.
	Richmond upon Thames		Potential issues raised around development on MOL and green belt. Local groups have successfully challenged developments in the area previously. Early engagement critical with local communities.
	Spelthorne		Key sensitives to areas around Kempton and challenges around proposing development on green belt.

3.3.10. Engagement across water companies and through the ACWG has involved the development of SRO design principles and the development of consistent assessment methodologies for Gate 2.

3.3.11. Thames Water and Affinity Water continue to host a regular Water Resources Forum, this is open to all interested stakeholder organisations and the purpose of the Forum is to update stakeholders on the progress to develop the Regional Plan and in turn company WRMP24s, and to share information at a formative stage to enable stakeholders to participate in the process. Three Forums were held during Gate 2 - in November 2021, February and June 2022<sup>11</sup>. At the November 2021 Forum information was shared on each SRO, including the programme of activities and summary of work packages to provide visibility of the work areas for each SRO and the opportunity for discussion on these options.

3.3.12. Our engagement with RAPID through Gate 2 has consisted of fortnightly liaison meetings, regular 'check-in' calls and participation at quarterly liaison meetings. Through Gate 2 we have provided progress updates, shared emerging plans and recommendations, provided key findings and sought advice for key decisions.

#### 3.4. Working openly and transparently

3.4.1. We are committed to work openly and transparently and have worked to achieve this by:

- Sharing information, and providing regular updates to stakeholders, on the programme of work and the studies underway and giving opportunity to comment.
- Working with regulators and stakeholders to jointly define the scopes of work and technical methods.
- Engaging with stakeholder organisations, who have specialist technical knowledge or a specific interest, to share relevant information and work collaboratively.
- Engaging with a wide range of stakeholder organisations to share work to develop the plan for our long-term future water supply and the potential solutions at a

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<sup>11</sup> WRF meeting minutes, including a list of attendees, are circulated to all attendees after the meeting. These can be provided on request please contact consultations@thameswater.co.uk

formative stage of development of the plan, and to listen to feedback and take it into consideration.

- Raising awareness on the challenge for water resources, the planning process and opportunities to contribute and input to shape long-term plans at a formative stage.

## 4. Engagement with customers

### 4.1. Summary of activity during Gate 1

4.1.1. The Gate 1 engagement<sup>12</sup> focused on examining customers' views on water resources planning – the challenges, the options, sharing resources and the SROs, including water recycling. The research highlighted the following:

- There is a low level of customer understanding and a lack of familiarity with reuse. Often it is not recognised that “unplanned” reuse is widely used in the UK.
- “Effluent” and even “reuse” can have negative associations, and therefore terminology and framing are important for engaging customers. Framing reuse schemes as “water recycling” has been observed to result in a more favourable view and we have adopted this within our Gate 2 submission.
- Concerns mainly focused on safety and hygiene, the use of chemicals, and water quality. Other issues were around the potential environmental impact with customers wanting to understand about the possible effect on rivers, and the energy intensity and carbon emissions. Cost was also raised due to the need for new treatment works.
- Positive comments focused on recycling as an efficient and logical approach, resilient to drought and a proven concept outside the UK.
- Overall support for recycling tends to be finely balanced. There is some evidence that the more informed customers become, the more they recognise the benefits. The challenge is therefore to improve communication about water recycling to lessen the perceived concerns of customers.

### 4.2. Overview of Gate 2 engagement

4.2.1. Our Gate 2 activity has built upon the learnings from Gate 1. The research has been undertaken in collaboration with other water companies, and SRO project teams, to ensure a consistent and efficient programme of customer engagement to support the development of all the SROs.

4.2.2. The work has focused on exploring some of the aspects raised at Gate 1 in more detail. There were three main components to our work:

- Exploring, through the regional engagement, what customers' view as ‘best value’ and how they weight and prioritise aspects of best value.
- Engagement on the acceptability of recycling in general, considering how recycling schemes work; process and treatment information; public health and drinking water quality concerns and ultimately how we need to communicate with customers. We explored this through two studies, a collaborative project, referred to as a “club”

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<sup>12</sup> London Effluent Reuse Gate 1 Submission, July 2021, Section 8

project with other SROs which considered these issues immersively including taste testing and co-designed a communications framework. The framework was then quantitatively tested with a wide range of customers and secondly, with customers in London, as possible recipients of recycled water.

- Exploration of customers’ views and preferences on additional value that schemes could provide. This work explored with customers what they understand as public value, their preferences, whether their views alter dependent on their proximity to the scheme and how much they would be willing to pay for a range of possible ‘added value’ options for a scheme such as London water recycling, and how this differs depending on the type of scheme.

4.2.3. To ensure transparency, we involved WRSE’s regional CCG in the work to explore the best value criteria, and for the SRO club projects we shared the scope, research materials and findings through workshops with the technical teams and interested stakeholders, including DWI and CCW.

### 4.3. WRSE seeking customers’ views on “Best Value”

4.3.1. WRSE commissioned an independent market research agency to explore with customers what they consider to be ‘best value’ in respect of planning future water resources, testing their views on best value criteria and metrics to be used to assess the performance of potential regional plans including the importance, or weights, that customers place on each. This research aimed to provide insight on the strength of customer preference for different aspects of a best value plan, as well as the trade-offs that customers are comfortable with when making choices between the enhancements, timings, and the bill impacts of alternative plans.

4.3.2. Over 300 household customers were engaged in this research. The criteria were grouped into 4 outcomes and the criteria were explained in a customer ‘friendly’ way. These are shown in Figure 4.1.

Best value outcomes	Criteria (Jan 21)
Deliver a secure and wholesome supply of water to customers and other users to 2100	<ul style="list-style-type: none"> <li>• Meet the supply demand balance*</li> <li>• Leakage*</li> <li>• Water consumption</li> <li>• Non-public water demand</li> <li>• Customer preferences</li> </ul>
Be deliverable at a cost that is acceptable to customers	<ul style="list-style-type: none"> <li>• Programme cost</li> <li>• Intergenerational equity</li> </ul>
Deliver long-term environmental improvement and social benefits	<ul style="list-style-type: none"> <li>• Strategic Environmental Assessment</li> <li>• Natural Capital</li> <li>• Biodiversity</li> <li>• Abstraction reduction*</li> <li>• Carbon</li> </ul>
Increase the resilience of the region’s water systems	<ul style="list-style-type: none"> <li>• Drought resilience*</li> <li>• Reliability</li> <li>• Adaptability</li> <li>• Evolvability</li> </ul>

*Figure 4.1 Best value outcomes and criteria*

4.3.3. The output from the research is presented in Figure 4.2. In general, customers place more weight on the delivery of secure supply of water, followed by the cost of investments, environmental improvements, with resilience placed on the lower end of the scale. The outputs have been used in the investment modelling undertaken by WRSE to develop the best value plan.

4.3.4. The output is also helpful to consider in the design of the SROs and the prioritisation of additional aspects that the SROs could potentially deliver.

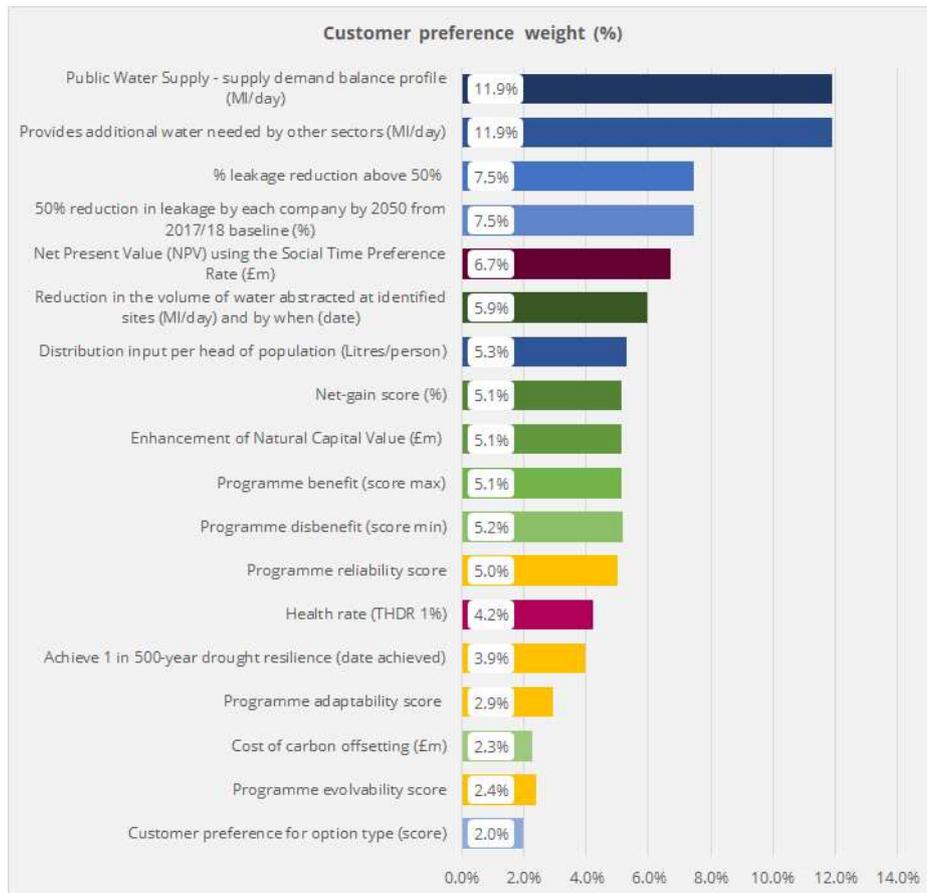


Figure 4.2: WRSE regional research to understand customers “weights” for best value criteria

4.3.5. The full report is included in Appendix D.2 to this Annex.

#### 4.4. Acceptability of water recycling and communicating a change in water source

4.4.1. We completed two studies to explore the acceptability of water recycling as customers’ source of water, considering how the schemes work; process and treatment information; public health and drinking water quality concerns and what is needed to ensure successful communication of recycling as a potential water source for customers. The studies were:

- a collaborative “club” project across 11 of the SROs with the aim of understanding of how customers interpret and respond to the different water source changes
- a follow up study with London customers who could potentially receive recycled water as their drinking water supply

#### 4.5. Water Club project – Change of source water

4.5.1. The aim of this study was to explore customers’ views and attitudes towards water source changes and the implications for communications. It comprised three stages of research:

- a review of existing evidence to understand attitudes towards water source change
- a qualitative phase to explore customers’ views about water resource options exploring contextual information and identifying areas of comprehension, appeal and preference; taste tests using samples representing a range of source options and engagement on how to communicate changes to water sources for each option type including content, tone of voice, timing and format. 96 household customers were engaged in this phase.
- quantitative testing of draft communications using different framings – environmental, human and practical. 1,762 customers and 198 non-household customers were engaged during the quantitative phase

4.5.2. The methodology is summarised in Figure 4.3.

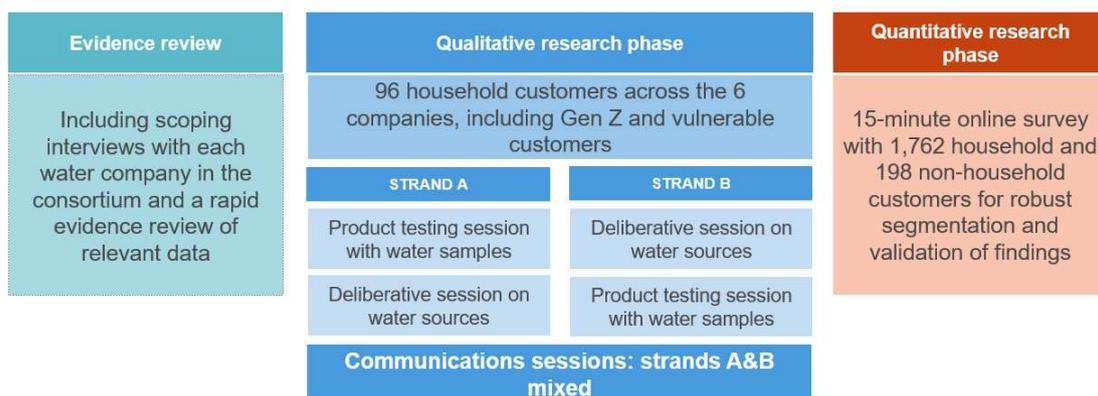


Figure 4.3 : Summary of the approach taken for the changing sources customer research

4.5.3. The key findings were:

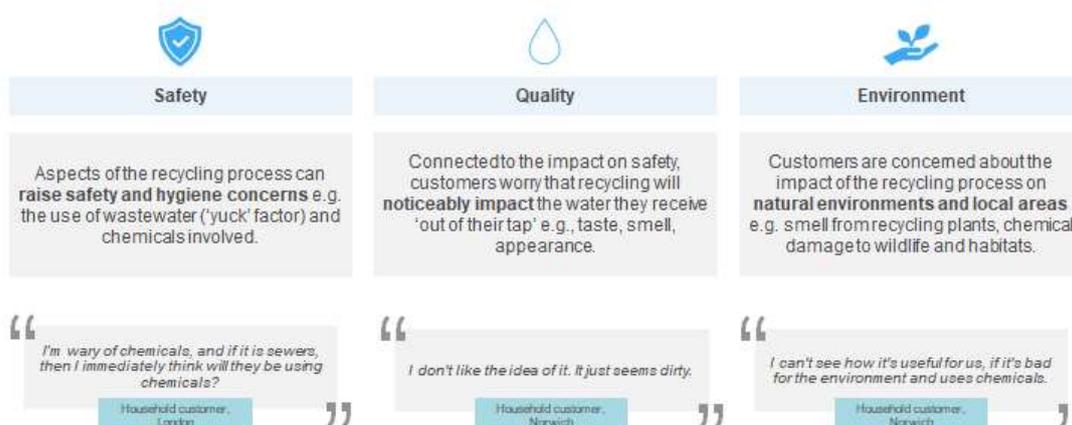
- Water is a low salience topic, with customers indicating a low level of awareness and understanding of issues relating to it. This, in part, is driven by general satisfaction with the customer experience of water, in terms of taste, smell and hardness.
- Customers also have low awareness of water scarcity, and, whilst all take steps not to ‘waste’ water, most are not actively trying to reduce their water consumption. Information on the topic is easily understood, however, this is not always enough to unseat long-standing perceptions that water is abundant in the UK.
- Customers believe that water companies should be taking steps to respond to the issue of water scarcity now and recognise that a mix of demand and supply-side solutions are required. However, there is a general desire to see water companies implement demand-side options first, including fixing leaks and educating customers.

- Customers say they are unlikely to engage with communications on source change, and taste tests indicate that most are not able to detect differences at the level that might be expected in a source change. However, there is still a need to communicate, customers generally feel that water companies have a responsibility to communicate changes to infrastructure and supply to the public, even if they feel they are unlikely to engage with these communications personally or in-depth and the communications should explain why the change is happening, give reassurances on what this will mean and provide practical information and clear guidance on the impact.
- In terms of communication, the ‘human’ or more personal framing, was found to work best, although for water recycling customers also wanted to understand environmental information.
- The timing of communications is important. Most household customers want initial advance notification, say three to six months in advance of the change, although non-household customers are more likely to want an earlier notification of a change. Most respondents then want to be reminded again of the change, at a point closer to the time, but generally only once.
- An email message and a letter, separate from the water bill, are the preferred forms of communication about source changes, consistent across sources. Most customers claim they would click through to look at additional information. Whilst, this number may be lower, providing comprehensive information to those who may want it is key.
- Of those who are more inclined to visit a website for further detail on the change, there is an expectation that this would include a wealth of comprehensive information. This includes detail on bills, taste, the process, the reason behind the change, safety, environmental impact, and information from an independent source.

4.5.4. Whilst there is a need to communicate on any source change, water recycling and desalination in particular need more engagement due to a higher level of spontaneous concerns. For recycling these concerns centre on safety, quality and the environment.

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## Overall, key concerns for Water Recycling centre on safety, quality and the environment



Britainthinks

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4.5.5. Many customers focus on the 'yuck' factor which can be hard to overcome.

**'Yuck' factor dominates**

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## It can be difficult for customers to overcome psychological barriers around Water Recycling

The majority of customers are initially uncomfortable with the notion of Water Recycling, largely driven by hygiene and safety concerns.

- These concerns centre on the involvement of 'wastewater' or 'sewage' in the recycling process - and the potential impact of this on safety and quality.
- Customers worry that this will contaminate the water, and even if they believe that regulation and safety checks are in place, they simply 'don't like the idea' of waste being involved in the process.
- For most, the 'yuck' factor associated with perceptions of 'recycling' water is difficult to put aside.

When tasting a product sample that reflects the type of water that might be produced from this source option, customers are surprised that the sample looks the same as their 'normal' water – and whilst some reported a slight difference, this was split between positive and negative, and all agreed they could adapt to the change. However, this does little to shift the ingrained 'yuck' factor, even when the product is revealed.

*"The idea of it makes me feel sick."*  
Household customer, Norwich

*"Some people might wonder if it is as good as the real stuff."*  
Household customer, Peterborough

*"I think it's so subtle. I just think if you drink it, you wouldn't notice. It's only because we are dissecting it that we're thinking this."*  
Household customer, London

Britainthinks  
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4.5.6. However, a small minority of customers do feel more neutral, particularly where there is an awareness – or expectation – that a form of water 'recycling' is currently involved in the UK water supply. This is particularly expected in more densely populated areas, where it is assumed that tap water has been 'reused' and treated to some extent.

4.5.7. Key points to successful communications on water recycling are:

- the clear steer that recycled water is safe to drink.
- information on the process - customers want to know about the process e.g. to use an online explainer that goes into more details specifically about the recycling process and reassurance that they are not "drinking sewage" would be important.
- hardness is a common concern - customers want information on whether the water would be harder or softer.

- taste is an important issue - customers want to understand about possible changes to taste for recycled water.

4.5.8. A summary of what's needed regarding future communications for water recycling is shown in Figure 4.4.

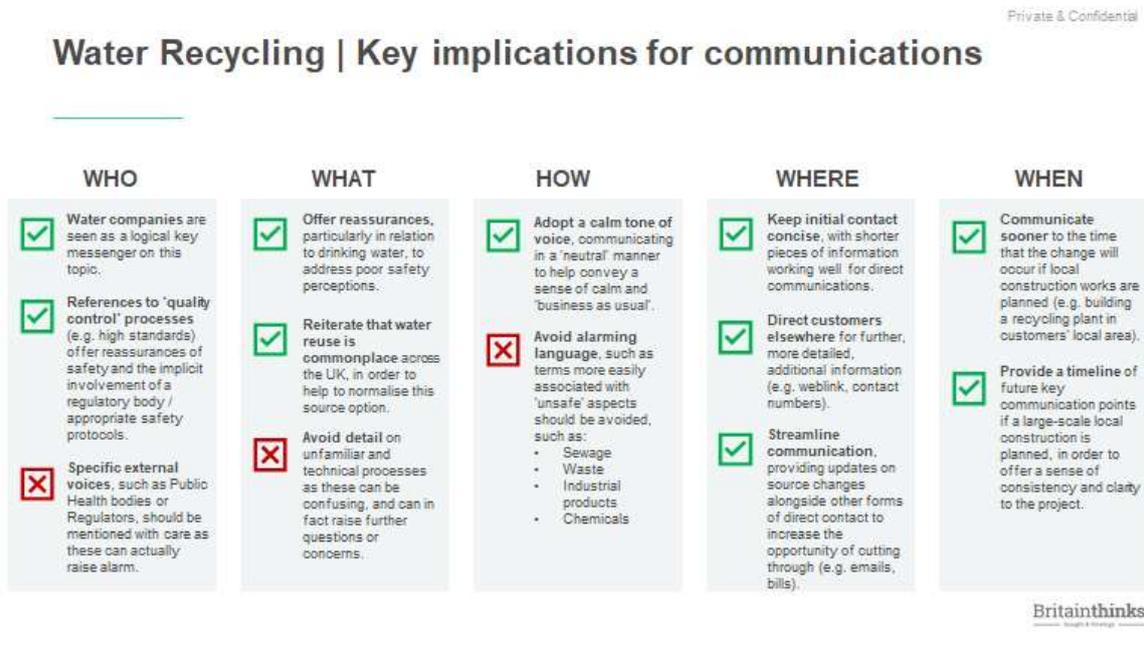


Figure 4.4 Communicating with customers on a future water recycling scheme

4.5.9. A communications framework, which took all the learning from the research, has been produced as a practical tool to use in future RAPID Gates and when a change to customers' water source is required including the language, framing and timings of communications. This includes directional recommendations on do's and don'ts when communicating specific source changes, based on the findings from this research, as well as interactive activities and stimuli for workshop. This is included in the research report which is presented in Appendix D.3 to this Annex.

## 4.6. Water recycling communications – London customers

4.6.1. The aim of this study was to test the communications framework developed by Britain Thinks (outlined above) with a cross section of London customers. Specifically, the style of language, the best 'messenger', timings in the approach to implementation, additional information requirements and what communications channels work best for customers.

4.6.2. The study was completed by independent market research agency, Verve, used an online pop-up community with 60 participants over a 3-day period in June 2022, with a summary of the approach shown in Figure 4.5.

## What we asked our community members...

### Day 1 Introductions and look at primary communication

- Participants completed activities designed to encourage a natural response (such as answering quickly or recalling the message from memory)
- Participants also asked to keep a diary of any communications they receive

### Day 2 discussion topics

- Other versions of the communication revealed and participants decide which one they find the most impactful

### Day 3 discussion topics

- Communication diaries discussed to understand what messages are most likely to get engagement
- A look at what they believe they would do if water recycling was to happen in the near future
- A final discussion about effective communications and thoughts around water recycling

*Figure 4.5: The study approach*

4.6.3. Messages were developed using three different frameworks – social norms i.e. something everyone is doing; positive framing i.e. focused on a positive outcome; and wildcard – testing “jargon” and other messages that we would not think would work well and a control.

4.6.4. Key findings from this study were:

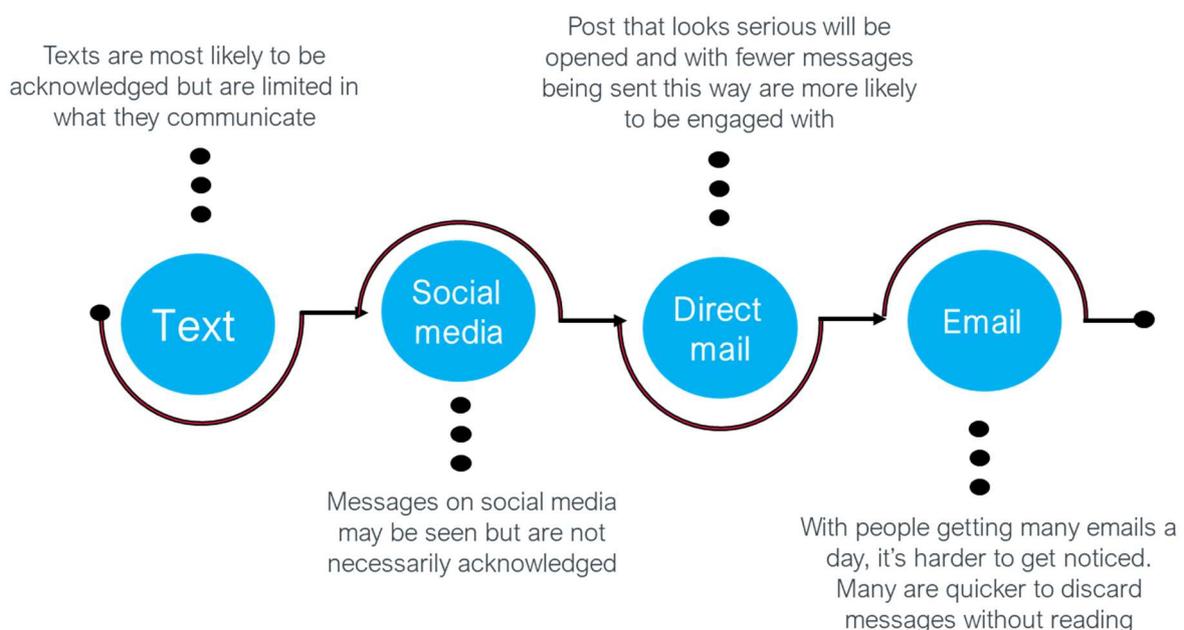
- Messaging needs to feel honest to be believed – customers have become more sceptical and will scrutinise messages before they are believed. Customers will want to know what the problem is, what is water recycling and how will it affect them and where they live
- Water recycling is a difficult concept to understand – this needs careful explanation with non-ambiguous language to avoid misinterpretation
- Understanding is key to acceptability. Clear messaging detailing how things may change for people is key to reassure and avoid upset Key questions for those most unhappy with the concept of water recycling are ‘will it taste good’, ‘is it safe’, ‘will it impact my bill’ and ‘will it impact the environment’

4.6.5. Figure 4.6 constructs the best messages based on the insights from customers.



Figure 4.6 Constructs the key messages

- 4.6.6. A minority of customers were not reassured by the communications and their concerns focus around four specific themes – will it taste good; is it safe; what’s the impact on bills and the environment.
- 4.6.7. Early communications about the challenges to water and the potential for an interrupted supply is an important backdrop to later acceptance of recycling. Thames Water is a trusted messenger and multiple channels will be needed to raise awareness and communicate ahead of scheme development and operation, with all messaging needing to feel “honest”



- 4.6.8. The full report produced by Verve is included in Appendix D.4.
- 4.6.9. Overall the research has given a clear steer to ensure engagement and communications with customers are designed correctly to enable successful promotion of future

recycling schemes. This work will be used in a timely manner for communicating with customers.

### 4.7. Exploring customers preferences for public or added value

4.7.1. This research study was undertaken as a “club project”, a collaboration across 11 SROs by independent research agency, Accent. It aimed to:

- Understand what added value customers perceive is important, as part of infrastructure development.
- Understand preferences for the added value, i.e. the balance between options such as economy, jobs, apprenticeships, leisure, education and carbon sequestration, etc.
- Determine if the preferences change, depending on the geographical location, type of scheme or other factors.
- Establish how much customers are prepared to pay for additional measures.
- Determine the nature of the language we should use to explain the added value to customers.

4.7.2. The research study comprised 3 components:

- Desk review of guidance on public/added value and case studies involving the measurement of customer preferences for added value.
- Qualitative research with household and non-household customers to introduce the concept of public value or added value and exploring what it means and what's important to customers. It provided a foundation of evidence on customer preferences and attitudes, and the language that should be used to explain added value.
- Qualitative research building on the learnings from the qualitative research and using choice experiment with over 5,900 household and 550 non-household customers.

4.7.3. The qualitative research showed that the concept of “public value” needed to be explained, it is not a commonly used term. Once the concept was understood the majority of people felt that it is important. However, most are ‘contingent supporters’ i.e. they need convincing that additional costs are justified particularly in the current economic climate. There are some additions that are common across projects for example economic and environmental benefits whilst customers’ expectations differ according to the project type and different projects attract different levels of support.

4.7.4. The qualitative research identified that public value in the water space was expected to fulfil five criteria; local community centric; long term justifiable; sustainable; water relevant and low maintenance.

4.7.5. The quantitative research explored participants’ willingness to pay for a set of potential project additions in the context of the SROs. The proposed additions are shown in Table 4.1.

*Table 4.1 Descriptions of potential project additions*

Project addition	Abbreviated description (report)
One in every 50 jobs created to develop the site will be an apprenticeship	One in every 50 jobs created will be an apprenticeship
A quarter of all employees working to develop the site will be recruited from the local area	A quarter of all employees are local
Increased visitor numbers, with economic benefits to the surrounding area	Increased visitor numbers, with economic benefits
Links to heritage and local history, through signs put up at the site.	Links to heritage and local history, through signs at the site
Space provided for eco -agricultural activities, including regenerative farming and re-wilding	Space provided for eco-agricultural activities
Irrigation reservoirs to improve local farmland	
Café with locally sourced food	
Fish ponds created, with public access.	
Visitor centre	
Shop selling sustainable products and gardening materials	
Outdoor BBQ/picnic facilities	
Water sports facilities, e.g. sailing, paddleboarding	
Land-based recreation/amenities, e.g. Go Ape, Segway hire, cycle hire	Land-based recreation/amenities
Restaurant/café/welfare facilities	
Wildlife viewing platform, Bird watching facilities	
Children’s playground	
Sensory garden/space for those with learning difficulties	
Walking paths, Boardwalk, Bridleway and Cycle trail	
Beach area	
Campsite	
Conference centre	
Education/training/research facility	
Links to bus and rail stations	
Reduced flood risk to surrounding area	
New wetland area, with benefits for flood risk, wildlife habitats and carbon capture	New wetland area
Specialist habitats created for wildlife, including butterfly bank, wildlife refuge, ponded areas, reed beds, new woodland and meadow, and creation of landscape scale habitat corridors	Specialist habitats created for wildlife

4.7.6. For households, the highest-valued project additions for sites that are 5 miles away from the home were:

- Specialist habitats created for wildlife (£3.87 annually)
- New wetland area (£3.24 annually)
- Walking paths, boardwalk, bridleway and cycleway (£2.52 annually)
- Wildlife viewing platforms and bird watching facilities (2.31)
- A quarter of all employees are local (£2.30 annually)

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- 4.7.7. The average valuation of any project addition was highest in the environmental area, followed by project additions in the economic area and the social area. The combined valuation of all project additions was around £24 with a median of £15.
- 4.7.8. In respect of water recycling, and new water treatment plants, expected additions were jobs for local people, apprenticeships and career opportunities as well as local environmental mitigation such as trees and shielding and potential to create wetland and habitat for wildlife was positive. Overall the social project additions were considered to be less valuable e.g. recreational facilities were considered to be out of keeping with the project.
- 4.7.9. These findings will inform the next stages of design for a water recycling scheme and what additional investment could be incorporated into the design to provide wider environmental and social benefit.
- 4.7.10. The full report of the research study is provided in Annex 5.

### 4.8. Working openly and transparently

- 4.8.1. The process of collaboratively delivering our customer engagement activity has been driven through the WRSE Engagement and Communications Board (for regional work) and steering groups formed by the SRO companies for each project.
- 4.8.2. We have benefited from a wide range of expertise with the participating company's insight, regulation and water resources teams to help the design and development of the engagement activities both ensuring best practice and alignment to wider insight activities to inform the PR24 business planning activities. The work was delivered by independent market research agencies compliant with the MRS code of conduct.
- 4.8.3. In addition, WRSE has facilitated a regional CCG, bringing representatives from the CCW and the company independent challenge groups to share and input on the approaches and materials used to engage customers. We also have shared briefs and materials for the research with both CCW and the DWI for comment have been engaged as part of the collaborative research activities.

## 5. Next steps beyond Gate 2

- 5.1.1. There will be ongoing engagement with the stakeholder community as part of the development of the SE regional plan and consultations on the draft regional plan and draft WRMP24s in autumn 2022.
- 5.1.2. The timings of the scheme, and the engagement on it, will be determined by the path that the regional plan and WRMPs take, and also feedback from RAPID, as such it is not possible to commit to a definitive plan of engagement activity and timescale at this stage.
- 5.1.3. For schemes that it is agreed will be taken forward, we will continue engagement to ensure the technical assessments draw on the detailed technical knowledge of specialists and experts, and the engagement is extended to meet the requirements set-out by RAPID for Gate 3 and where applicable the planning regime for schemes. Engagement will include:

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- RAPID on the programme of work, articulation of issues and risks, and the delivery of outputs to sufficient quality and time demonstrating efficient spend.
  - NAU, EA, NE and DWI, as well as other stakeholder organisations represented on the TWGs to ensure that further work is robust and the approach takes account of constraints, as well as opportunities. Work through Gate 3 will update scheme design, drinking water risk assessments, and environmental assessments improving our understanding and providing a greater level of confidence in findings.
  - 1-2-1 engagement with strategic and specialist stakeholders, including NGOs, and utilities providers to ensure the ongoing technical studies are robust and based on the most up-to-date data and assessment methods.
  - On-going engagement with LPAs drawing on the feedback and key issues raised in the introductory meetings and for schemes selected specific pre-planning engagement.
  - Public engagement on scheme options where applicable, to develop scheme consenting designs.
- 5.1.4. We will explore opportunities for social, economic, and environmental benefits, beyond providing a resilient and sustainable water resource. We will continue, and extend, the engagement to share, and seek input to, the design of the scheme including opportunities for partnership working to enhance the wide potential benefits and mitigate as far as possible issues. This engagement will include organisations such as local government, community, education, economic and growth organisations to discuss opportunities for amenity and recreation, education, local employment and skill creation.
- 5.1.5. There is no foreseen need for any further specific customer research / insight to inform Gate 3 plans for London water recycling schemes and the next steps are:
- To develop a customer communication plan drawing on the insight gained from the research completed and collaborate on this with other companies who are also looking at recycling. This will include building the backdrop narrative around the pressures on our current water supply and the solutions being examined; and
  - To focus on community consultation and engagement including extended engagement with local communities who could potentially be affected as part of the consultation on the draft WRMP24.
  - As work continues towards delivering schemes aligned to the regional plan Thames Water will ensure lessons learnt within the industry are captured and reflected in future engagement around changing water sources and the engagement and communication with customers.

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### *Appendix D.1: Overview of engagement to inform the development of the SE regional plan*

<b>Date</b>	<b>Stakeholder group/activity</b>	<b>Agenda/Discussion topics</b>
<b>2021</b>		
January (20)	Multi-sector group	Review of non-PWS demand long-term forecast, review of potential impact of updated EA forecasts on abstraction.
February (12 & 16)	Best Value Plan consultation webinar 75 attendees	Presentation, discussion and Q&A on the Best Value Plan objectives, criteria, and metrics to support the consultation
February (22)	Stakeholder Advisory Board (SAB)	Introduction to refreshed terms of reference and work programme; update on the best value planning approach.
March (2)	Environmental Destination workshop – regulators and EAG technical advisors	EA presentation on proposed abstraction reduction scenarios and application of this; Development of catchment portfolios.
March (8)	Environmental Advisory Board	Focus on environmental destination; BV planning – criteria and metrics; Catchment options and delivery mechanisms
March (17)	Multi-Sector group	Overview of position for each sector
March (25)	Thames Water & Affinity Water Water Resources Forum	Best Value planning consultation – feedback – next steps for engagement with customers and stakeholders; update on SE planning challenge
May	Future Water Resource Requirements	Publication setting out the planning challenge for the SE
May (18)	Stakeholder Advisory Board (SAB)	Workshop to consider the engagement with customers and stakeholders on alternative plans and the development of an interactive tool to clearly communicate the information.
May/June	Options -overview of the options considered in the SE plan	Series of workshops organised by option type to showcase the range of options under consideration and provide an opportunity to discuss and comment on the options.
May	Agriculture/horticulture working group	Review of opportunities for shared options with agricultural and horticultural stakeholders
June	Multi-Sector group	Update on the modelling work and discussion on the next steps for agriculture/horticulture shared options
July	Webinar for Retailers	Focus on the company drought plan consultations and introduced the regional plan
September	Environmental Advisory Group	Focus on the environmental destination for the SE
September	Agriculture/horticulture working group	Ongoing discussion on opportunities for shared options with agricultural and horticultural stakeholders
September	Multi-Sector group	Update on the modelling work and discussion on the next steps for agriculture/horticulture shared options
September	Regional reconciliation webinar	Recap on role of regional planning, overview of reconciliation process and updates from regional groups
October	Stakeholder Advisory Board (SAB)	Focus on the adequacy of the approach to ensure stakeholder and customer views are considered in the development of the plan.
November	Horticultural Trades Association	Briefing on the emerging plan
November	CPRE	Briefing on the emerging plan
November	Thames Water & Affinity Water Water Resources Forum	Update on work to develop the regional plan, with a focus on the SROs
December	NFU	Briefing on the emerging regional plan
December	CCW	Briefing on the emerging regional plan
December	Blueprint for Water	Briefing on the emerging regional plan
December	South East Rivers Trust	Briefing on the emerging regional plan
January	National Infrastructure Commission	Briefing on the emerging regional plan
January (13)	OCC & VoWH DC members and officers	Pre-consultation briefing event
January (17)	Wide stakeholders > 270 attendees	National Framework led webinar on the national water resource picture including a summary of each regional group's regional plan.
January (20)	Wide stakeholders > 160 attendees	Launch of the consultation on the emerging regional plan for the SE
January (31)	Wide stakeholders	SE (West region) launch webinar

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February (1)	Wide stakeholders	SE (East region) launch webinar
February (2)	Wide stakeholders	SE (North region) launch webinar
March (1)	Wide stakeholders	Live consultation Q&A
March (1)	Stakeholder Advisory Board	Discussion on the consultation feedback and next steps
March (3)	Environmental Advisory Group	Environmental ambition & prioritisation
March (5)	Community Drop-in, Steventon, Oxon	A drop in event to enable the local community to engage with TW, Affinity and SESRO team
April (28)	Environmental Advisory Group	Overview of updated environmental ambition for all SE companies
May (20)	Environmental Advisory Group	Ongoing discussion on environmental ambition and prioritisation
June (7)	Thames Water & Affinity Water Water Resources Forum	Overview of responses to the consultation and work to transition to the best value regional plan
July (11)	EAG, SAB and MS Group joint workshop	Review alternative programmes to inform the preferred draft plan for consultation

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*Appendix D.2 WRSE Research to test customer preferences for best value outcomes, EFTEC, July 2021*

*Appendix D.3 Changing water sources, Britain Thinks, July 2022*

*Appendix D.4 Water recycling communications, Verve, July 2022*

*Appendix D.5 Research to explore customers preferences for public or added value, Accent and PJM Economics, July 2022*

