

March 2023

**Strategic regional water
resource solutions:
standard gate two draft decision
for Severn Trent Sources**

Ofwat

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1. Introduction

The purpose of this publication is to set out our draft decision about whether the Severn Trent Sources¹ solution should continue to receive development funding². The solution owner Severn Trent Water submitted their standard gate two reports on 14 November 2022 for assessment. Further information concerning the background and context of the Severn Trent Water Severn Trent Sources can be found in the Severn Trent Sources publication document on the Severn Trent Water website³.

This publication should be read in conjunction with the draft decision letter issued to each solution owner. Both this document and draft decision letters have been published on our website.

The assessment process is overseen by RAPID, with input from the partner regulators Ofwat, the Environment Agency and the Drinking Water Inspectorate. The Environment Agency together with Natural England, have reviewed the environmental sections of the submissions, and provided feedback to RAPID. The Consumer Council for Water provided input to the assessment on customer engagement. Natural Resources Wales is involved in an advisory capacity and has a decision-making role for any solution involving Wales, Welsh policy and legislation.

The solution owners and other interested parties can now respond to the draft decision. Representations are invited by email to rapid@ofwat.gov.uk and the representation period will close at 6pm on 11 May 2023. All representations will be considered before our final decision is published at 10am on 28 June 2023.

We will publish representations on our website at www.ofwat.gov.uk/regulated-companies/rapid, unless you indicate that you would like your representation to remain unpublished. We will also share representations with our partner regulators, Ofwat, the Environment Agency and the Drinking Water Inspectorate and with Natural England. Subject to the following exceptions, by providing a representation to this consultation you are deemed to consent to its publication.

If you think that any of the information in your response should not be disclosed (for example, because you consider it to be commercially sensitive), an automatic or generalised confidentiality disclaimer will not, of itself, be regarded as sufficient. You should identify specific information and explain in each case why it should not be disclosed (and provide a redacted version of your response), which we will consider when deciding what information to publish. As minimum, we would expect to publish the name of all organisations that

¹ Referred to in PR19 final determination as “Severn Trent Sources”

² [PR19 final determinations: Strategic regional water resource solutions appendix](#)

³ <https://www.severntrent.com/about-us/our-plans/sro-plans/>

provide a written response, even where there are legitimate reasons why the contents of those written responses remain confidential.

In relation to personal data, you have the right to object to our publication of the personal information that you disclose to us in submitting your response (for example, your name or contact details). If you do not want us to publish specific personal information that would enable you to be identified, our [privacy policy](#) explains the basis on which you can object to its processing and provides further information on how we process personal data.

In addition to our ability to disclose information pursuant to the Water Industry Act 1991, information provided in response to this consultation document, including personal data, may be published or disclosed in accordance with legislation on access to information – primarily the Freedom of Information Act 2000 (FoIA), the Environmental Information Regulations 2004 (EIR) and applicable data protection laws.

Please be aware that, under the FoIA and the EIR, there are statutory Codes of Practice which deal, among other things, with obligations of confidence. If we receive a request for disclosure of information which you have asked us not to disclose, we will take full account of your explanation, but we cannot give an assurance that we can maintain confidentiality in all circumstances.

We would like to thank Severn Trent Water for the level of engagement, collaboration and innovation that they have exhibited during this stage in the gated process.

2. Solution Summary

2.1 Solution summary

Severn Trent Sources (STS) uses treated final effluent from Netheridge wastewater treatment works at a location near to Deerhurst, currently identified as Haw Bridge. This will provide raw water support to the Severn to Thames Transfer (STT). STT will abstract the same volume of water and transfer it to the River Thames. The solution forms part of the wider River Severn to River Thames Transfer system composed of STS River Severn to River Thames Transfer (STT) and North West Transfer (NWT).

Figure 1. Severn Trent Sources Solution Schematic



3. Solution assessment summary

Table 1. Draft decision summary

Recommendation item	Severn Trent Sources
Solution owners	Severn Trent Water
Should further funding be allowed for the solution to progress to gate three?	Yes
Is there evidence all expenditure is efficient and should be allowed?	Yes
Delivery incentive penalty?	No
Is there any change to partner arrangements?	No
Are there priority actions for urgent completion?	Yes, set out in section 4.1.
Are all priority actions and actions from previous gates addressed?	Yes
Suitable timing for gate three has been proposed	Yes, January 2025.

3.1 Solution progression to standard gate three

The evidence suggests that the solution is a potentially valuable way of supplying water to customers. Based on our assessment of a wide range of areas that could concern the progression of the solution, we have concluded that the solution should progress through the gated process to gate three, subject to the possibility that, after considering Severn Trent Water's submissions on response to the priority actions set out in Appendix A at the regular checkpoint with Severn Trent Water in December 2023, we may decide to set a conditional review point (Conditional Review Point) at which we may decide that the solution should not proceed beyond the Conditional Review Point or should only progress subject to further priority actions, actions or recommendations. Figure 2 below summarises the area of any progression concerns, including indication of the significance. The reasons for this assessment conclusion are set out in table 2 below.

Decisions on funding as a result of this progression decision, are set out in section 3.2.

Figure 2. Assessment of solution's progression concerns

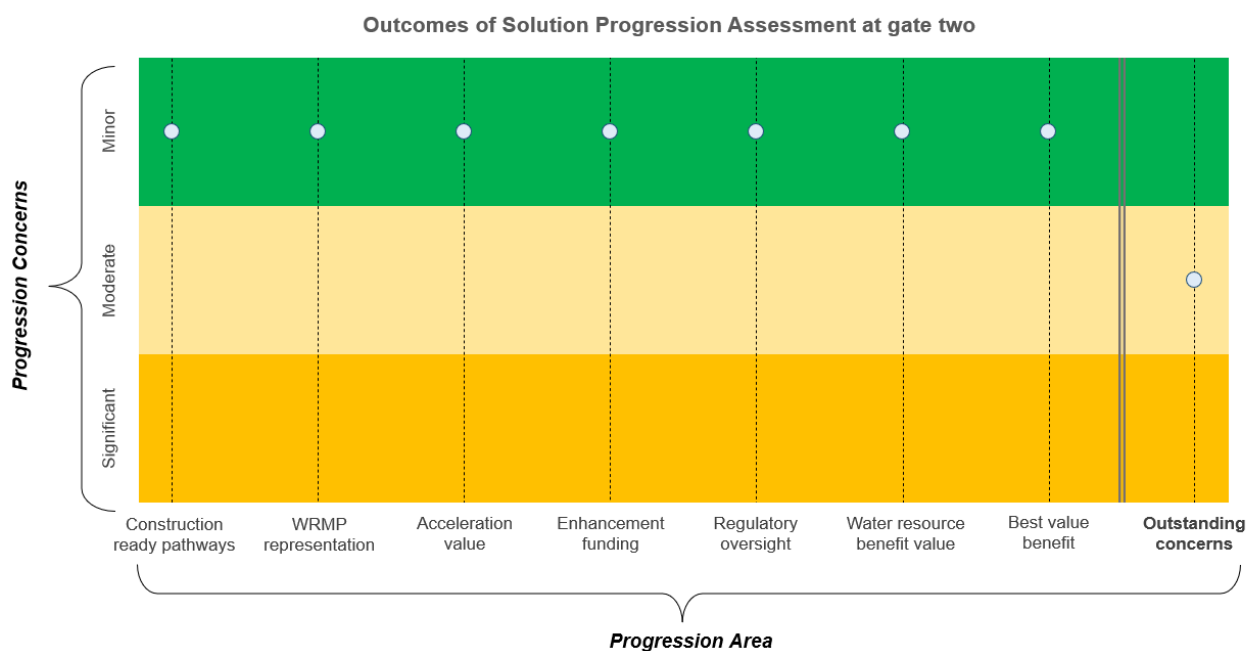


Table 2. Draft decision progression criteria

Progression criteria	Severn Trent Sources
Solution owners	Severn Trent Water
Is the solution in a preferred or alternative pathway in relevant regional plan or WRMP (where applicable) to be construction ready by 2030?	Yes, the solution is chosen in Thames Water's draft Water Resource Management Plan (WRMP24), as a solution on its preferred pathway, which is the relevant plan for the standard track. The solution is also in the Water Resources South East draft regional plans. The solution will be construction ready by 2029.
	No further action is required on this progression criteria.
Do regulators have any significant concerns with the solution's inclusion or non-inclusion in a WRMP or regional plan or with any aspects that may impact its selection, to a level that they have (or intend to) represent on it when consulted?	No, the regulators do not have concerns on how the solution is represented, or the information about it, in Thames Water or Severn Trent Water's draft WRMP24, Water Resources West's draft regional plan or Water Resources South East's draft regional plan.
	No further action is required on this progression criteria.
Is there value in accelerating the solution's development to meet a company's or region's forecast supply deficit?	Yes. A solution is required to address Thames Water's forecast deficit.
	No further action is required on this progression criteria.
Does the solution need continued enhancement funding for investigations and development to progress?	Yes. Continued funding is required to develop a solution to be delivered in time for the planned construction ready date.
	No further action is required on this progression criteria.

Does the solution need the continued regulatory support and oversight provided by the Ofwat gated process and RAPID?	Yes. The solution will continue to benefit from the regulatory support and oversight provided by being included in the RAPID programme.
	No further action is required on this progression criteria.
Does the solution provide a similar or better cost / water resource benefit ratio compared to other solutions?	Yes. This solution does provide a similar or better cost / water resource benefit ratio compared to other solutions.
	No further action is required on this progression criteria.
Does the solution have the potential to provide similar or better value (environmental, social and economic value – aligned with the Water Resources Planning Guideline) compared to other solutions?	Yes, this solution has the potential to provide similar or better value (environmental, social and economic value – aligned with the Water Resources Planning Guideline) compared to other solutions.
	No further action is required on this progression criteria.
Does a regulator or regulators have outstanding concerns that have not been addressed through the strategic planning processes taking into account proposed mitigation?	Yes. Outstanding concerns remain with the need for a detailed stakeholder engagement plan, the lack of engagement with relevant Drinking Water Quality teams, the proposed enhanced treatment required for the new discharge location, the assessment of water quality impacts on drain down points, and the significance of the depleted reach.
	This progression concern is addressed in priority actions 1 and 3, and action 2 in Appendix A of this document.

3.2 Solution funding to standard gate three

We are changing the funding of this solution. The details of this funding decision are set out in Table 3 below, and details on forward programme in section 7.1.

Table 3. Severn Trent Sources funding allowances

	Gate one	Gate two	Gate three	Gate four	Total
Severn Trent Sources gated allowance	£0.53m	£0.80m	£4.79m	£2.12m	£8.23m
Comment	10% of development allowance calculated as 6% of total solution costs	15% of development allowance calculated as 6% of total solution costs	65% of the forecast overspend has been added on top of the previous allowance determined at PR19	40% of development allowance calculated as 6% of total solution costs	Total development allowance calculated as 6% of total solution costs
Previous Allowance	£0.53m	£0.80m	£1.86m	£2.12m	£5.30m
Change from Previous Allowance	£0.00m	£0.00m	£2.93m	£0.00m	£2.93m

This funding has been revised to account for forecast costs at gate three. We have determined that across all solutions gate three costs have risen due to factors such as increases in solution design costs, changes in scope and additional funding required to develop the environmental impact assessment (EIA), water quality assessments, ground investigations and other environmental field studies and assessments. We determine that providing the original gate three allowance combined with 65% of their projected overspend at gate three is appropriate. We do not feel that it would be appropriate to provide solutions with their complete projected overspend at gate three as these projections are not fully mature, and we want to ensure that solutions are still incentivised to keep costs as low as possible.

In addition, we are changing the cost sharing rate that is applied to the solution. At gate three, the solution owners will be responsible for 80% of any overspend. Furthermore, solution owners will be able to retain 25% of any total underspend at gate three, while the remaining 75% will be returned to customers. This diverges from the 50% cost sharing that was outlined in the [PR19 final determinations: Strategic regional water resources solution appendix](#).

3.3 Evidence of efficient expenditure

The PR19 final determination specified that any expenditure on activities outside the gate activities for the identified solutions (or solutions that transfer in) will be considered as inefficient and be returned to customers. We will consider whether gate activity is efficient by considering the relevance, timeliness, completeness, and quality of the submission which should be supported by benchmarking and assurance.

Severn Trent Sources has carried forward £0.31m underspend from gate one, increasing the allowance available to them at gate two to £1.06m.

Our assessment of the efficient costs as spent on standard gate two activities results in an allowance for this solution of £0.81m (of £0.81m claimed). Severn Trent Sources has therefore underspent its combined gates one and two allowance by £0.24m and may take this underspend forward to gate three, subject to any decisions taken at a Conditional Review Point, increasing the allowance available to them at gate three to £5.03m.

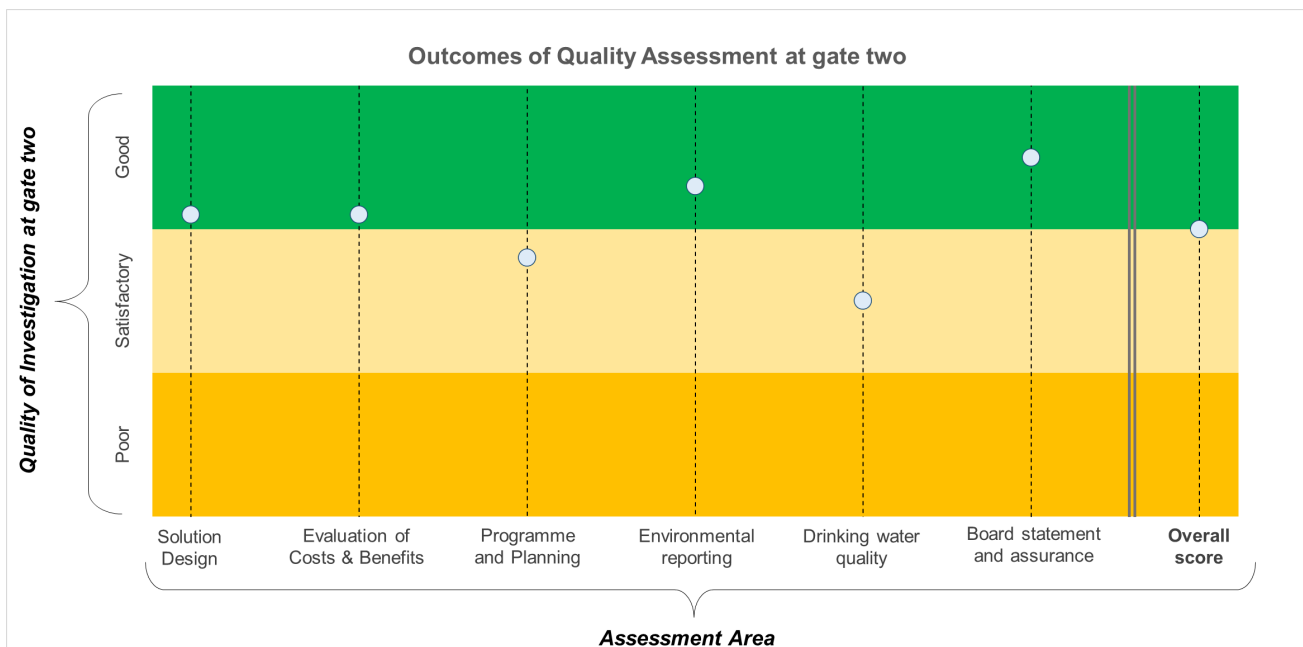
From gate two, we will move to look at the cumulative gate spend against the cumulative total allowance, across all gates consistent with the activities being undertaken. For example, any gate four allowance that is brought forward towards gate three should be for the purpose of early gate four activities. Overspends and underspends are then to be managed through cost sharing between the water company and customers. As Severn Trent Sources is progressing to gate three, this will apply here, subject to any decisions taken at a Conditional Review Point.

3.4 Quality of solution development and investigation

The aim of the assessment was to determine whether gate two activities have been progressed to the completion and quality expected, for the continued development of the solution.

Figure 3 shows our assessment of the work completed on the solution, which was presented in the gate two submission. Our assessment was made against the criteria of robustness, consistency, and uncertainty to grade each area of the submission as good, satisfactory, or poor in accordance with the [standard gate two guidance](#), (updated version published on 12 April 2022). We also assessed the Board assurance provided.

Figure 3. Assessment of quality of investigation



Our overall assessment for the solution submission is that it is a good submission but falls short of meeting gate two expectations in some areas.

In addition to the overall assessment score, there is some variance in expectations being met across the submission, with Programme and Planning and Drinking Water Quality being assessed as requiring attention.

We explain our assessment of each individual area, including any shortfalls in expectations, in the sections below. We have not applied any delivery incentive penalties as a result of this assessment of quality, as further detailed in section 4.

3.4.1 Solution Design

Our assessment of the solution design considered the quality of the evidence provided on the initial solution and sub-options; the anticipated operational utilisation of solutions; the interaction of the solution with other proposed water resource solutions and stakeholder and customer engagement. The assessment also considered whether information was provided on the context of the solution's place within company, regional and national plans.

We consider Severn Trent Water to have provided partially sufficient evidence of progress in developing the solution design for gate two. They have fallen short in providing enough evidence in the areas of stakeholder and customer engagement and alignment with company, regional and national plans, for which priority actions, actions and recommendations are included.

We welcome the engagement with Severn Rivers Trust at gate two. However, we require provision of a detailed plan for local, strategic stakeholder and customer engagement, including Welsh interests by the regular checkpoint in December 2023-and ongoing updates provided through gate three regular checkpoints on its implementation, progress and how customer and stakeholder views have/will inform key decisions.

Alignment with company, regional and national plans requires improvement, as there are inconsistencies between the information presented in the submission and the WRMPs. We expect an update on final alignments and proposals at the regular checkpoint in December 2023. We require Severn Trent to ensure the solution aligns with relevant WRMP and regional plans. We also recommend that Severn Trent continue to explore water transfer opportunities to other regions.

3.4.2 Solution costs

Our assessment of the unit costs of delivering Severn Trent Sources shows that they are reasonable at this stage. Cost changes from gate one to gate two have been sufficiently explained and are as a result of detailed development of the solution or changing market conditions. For instance, the discharge location has been changed to Haw Bridge, reducing the transfer pipe length and pumping head. Our assessment also considers the use of the solution as a drought resilience asset, and therefore cost per capacity is often a more appropriate metric than cost per projected utilisation. We will continue to scrutinise cost estimate changes from gate two to gate three.

3.4.3 Evaluation of Costs and Benefits

Our assessment of the evaluation of costs and benefits considered the quality of the information provided on initial solution costs; the social, environmental and economic cost

and benefits, water resource benefits and wider resilience benefits. The assessment also considered whether evidence was provided on how the solution delivers a best value outcome for customers and the environment.

We consider that Severn Trent Water have provided partially sufficient evidence of evaluating the costs and benefits of the solution to an appropriate standard for gate two.

The environmental net gain assessment is well presented and evidenced. The submission describes the connection to other assessments e.g. biodiversity net gain and carbon assessment. However, there is no description of the best value metrics used. The submission states that Water Resources South East (WRSE) regional plan metrics are used however there is explanation of what these are. There is also no reference to WRMP24 best value guidance or Ofwat public value principles.

There is insufficient evidence to determine whether the solution has the potential to provide similar or better value compared to other options. The best value decision making and justification for solution option selection and timing is not clearly presented. There is insufficient evidence to determine whether Severn Trent Water have considered a wide range of metrics, risks and values supported by data, analysis and customer/stakeholder support.

In addition to the priority actions set in Appendix A, we would welcome a deep dive session across all three STT system solutions early in gate three (including NWT and STT). This session should explore how environmental metrics have been considered and gain more clarity around the wider socio-economic benefits, including all ecosystem service benefits and cultural benefits in relation to Wales, rather than just environmental benefits. This session would clarify how best value metrics link to the wider benefits study and where WRMP24 best value guidance and the public value principles from Ofwat have been followed. For example, what has been considered for socio-economic metrics and how this has scored. For example, local markets, labour, skills, jobs, supply chains etc. and how would these benefits be maximised through development and delivery of the solution.

3.4.4 Programme and Planning

Our assessment of the Programme and Planning considered whether Severn Trent Water presented a programme with key milestones and whether its delivery is on track. The assessment also considered the quality of the information provided on risks and issues to solution progression, the procurement and planning route strategy and subsequent gate activities with outcomes, penalty assessment criteria and incentives.

We consider the evidence provided by Severn Trent Water regarding the programme and planning, risks and issues and the procurement and planning route strategy for the Severn Trent Sources to be of partially sufficient detail and quality for gate two. Additional work is required in the area of risks and issues to solution progression. We expect Severn Trent Water

to provide more information on the proposed advanced treatment processes and on the significance of the depleted reach to fully understand the overall risk to the environment by gate three.

We have concerns with the procurement section, in particular the assessment of technical discreteness for suitability for Direct Procurement for Customers (DPC). In terms of the criteria for being a DPC project, the solution has used an arbitrary cut off point for determining whether works are discrete or not and have not fully considered how commercial arrangements could address any issues. We expect Severn Trent Water to review the technical discreteness assessment following Ofwat's consultation on its latest guidance⁴ and provide an updated assessment.

Work provided for subsequent gate activities with outcomes, penalty assessment criteria and incentives is partly lacking. Clarification is required around how risks identified in the gate two submission around output availability (risk 31) and anticipated permitting resulting in additional treatment (risk 32) are addressed by gate three activities in the programme plan.

3.4.5 Environment

Our assessment of Environment considered the initial option-level environmental assessment; the identification of environmental risks and an outline of potential mitigation measures; the detailed programme of work used to address environmental assessment requirements and the initial outline of how the solution will take into account the carbon commitments.

We consider Severn Trent Water to have provided sufficient evidence of progress in the environmental assessment, potential mitigations, future work programmes and embodied and operational carbon commitments for gate two. We welcome continued early engagement in gate three to ensure the remaining uncertainty in the environmental assessments are addressed.

We consider that future carbon submissions would benefit from additional information on:

- a range of uncertainties and a plan to mitigate them – clarity on the calculation process (emission factors are missing);
- a plan to seek the availability of low carbon material;
- information on the reporting of operational carbon emissions post project completion; and
- how carbon savings have helped to mitigate the solution costs.

⁴ Technical discreteness consultation, Ofwat, Feb 2023 <https://www.ofwat.gov.uk/consultation/technical-discreteness-consultation/>

3.4.6 Drinking water quality

Our assessment of Drinking Water Quality considered drinking water quality and risk assessments; evidence that the solution has been presented to the drinking water quality team and a plan for future work to develop Drinking Water Safety Plans.

We consider Severn Trent Water to have provided minimally sufficient evidence of progress in the drinking water quality assessment, considerations, and future work around Drinking Water Safety Plans for gate two. The submission fails to provide evidence that the solution has been presented to the drinking water quality team, for which priority actions, actions and recommendations have been provided.

The assessment for drinking water has scored satisfactory as it meets most of the expectations of the guidance for gate two. However, there is a priority action, action and recommendation in relation to liaison with company drinking water teams. We expect the project team to demonstrate that they have consulted with the drinking water quality teams of all water companies impacted by the solution to understand current risks identified in Drinking Water Safety Plans (DWSPs) and to inform any updates to these.

3.4.7 Board Statement and assurance

The evidence provided relating to assurance is sufficient for this stage of the gated process.

We consider that the Board of Severn Trent has provided a comprehensive assurance statement and has clearly explained the evidence, information and external / internal assurance that it has relied on in giving the statement.

4. Actions and recommendations

Where the submission has not been assessed as ‘meeting expectations’ in the quality assessment, or progression concerns have been raised, we have provided feedback on where we will seek remediation of the issues. We have also identified specific steps that solution owners should take in preparing for standard gate three.

We have categorised these remediation issues and steps into priority actions, actions and recommendations.

Priority actions are those that either should have been completed at gate two and must now be addressed on a short timescale in order to make sure the solutions stay on track, or are essential early actions for gate three to progress appropriately. They require urgent remediation in full.

Actions are those that should be addressed in full in the standard gate three submission. The response to these actions will influence the assessment of the gate three submission. Recommendations are issues where additional information or clarification could improve the quality of future submissions.

We have also assessed progress on actions and recommendations from gate one.

4.1 Actions and recommendations from gate two assessment

Six priority actions have been identified for Severn Trent Sources, which should be delivered by the regular checkpoint in December 2023. If solution owners cannot meet this deadline please explain this in the representation.

Twelve actions and recommendations have been identified for Severn Trent Sources, which should be fully addressed at the gate three submission. Progress against actions will be tracked as part of regular checkpoints the solution holds with us whilst undertaking gate three activities.

The full list of priority actions, actions and recommendations for Severn Trent Sources can be found in Appendix A.

4.2 Actions and recommendations from gate one assessment

We have assessed whether Severn Trent Sources has met actions that were set out as a result of our gate one assessment.

No priority actions were identified for Severn Trent Sources.

Eight actions and recommendations were identified for Severn Trent Sources, which were expected to be fully addressed at the gate two submission.

We have decided that the actions have not been fully addressed in the gate two submission. Further detail of our conclusion against each individual action is shown in Appendix B.

5. Delivery Incentive Penalty

We have not applied delivery incentive penalties to this solution, as a result of the assessment carried out on the gate two submission.

6. Proposed changes to partner arrangements

There are no changes proposed to partner arrangements from gate two.

7. Gate three activities and timing

The solution will continue to be funded to gate three as part of the standard gate track, subject to any decisions at any Conditional Review Point.

For its gate three submission, we expect Severn Trent Water to complete the activities listed in [PR19 final determinations: strategic regional water resources solutions appendix](#), as expanded on in section 7 of the solutions gate two submission. Activities are expected to be completed in line with delivery incentives and expectations set out in [RAPID's gate three guidance](#). We also expect the actions listed in appendix A to be addressed.

7.1 Gate three timing

Severn Trent Water have proposed a date for gate three of January 2025 with a proposed checkpoint in February 2024. This is proposed alongside a forward programme of gate four in 2028, proposed planning application submitted in 2026, solution construction ready in 2029, and solution operational in 2031.

We agree that Severn Trent Sources gate three should be January 2025. This aligns gate three with solutions on a similar programme, and for RAPID to efficiently assess progress of activities, ahead of the solutions proposed planning application.

We have reviewed the forward programme for gate four. Gate four should be scheduled a minimum of a month after the acceptance of planning applications, so suggest gate four should be October 2026.

We have also decided that there may be a Conditional Review Point. After we have considered Severn Trent Water's submissions in response to the priority actions set out in Appendix A at the regular checkpoint with Severn Trent Water in December 2023, we will confirm to Severn Trent Water whether there will be a Conditional Review Point and the date of the Conditional Review Point, if there is to be one. Any Conditional Review Point will be in addition to the regular checkpoints that Severn Trent Water holds with us.

The forward programme proposed by the solution is in line with the principles of RAPID's standard programme. Funding arrangements are set out in section 3.2 of this document.

8. Next steps

Following publication of this standard gate two draft decision solution owners and other interested parties are invited to respond to the draft decision. Representations, including evidence from solution owners that priority actions (identified in the Appendix) have been addressed, can be made by email to rapid@ofwat.gov.uk and will close at 6pm on 11 May 2023.

All representations will be considered before our final decision is published at 10am on 28 June 2023.

Appendix A: Gate two actions and recommendations

Priority Actions – to be addressed by the dates specified		
Number	Area	Detail
1	Solution Design	<p>Provide to <u>RAPID</u> a detailed plan for stakeholder and customer engagement (strategic and local). This plan should:</p> <ul style="list-style-type: none"> • explain how customer and stakeholder views have informed and will inform key decisions; • demonstrate how relevant local, strategic and regulatory Welsh stakeholders are consulted e.g. Cadw/PEDW/Hafren Dyfyrdyw; • seek views from CCW and explain subsequent actions as a result of this engagement. <p>This will be required by the regular checkpoint in December 2023</p>
2	Costs & Benefits	<p>Ensure that best value analysis (following relevant guidelines) is undertaken and presented for all options within the solution, with a focus on incorporating environmental, societal, and economic costs. Link into discussions of best value of this and other enabling solutions for dependant solutions (eg Severn Thames Transfer). This will be required by the regular checkpoint in December 2023</p>
3	Costs & Benefits	<ul style="list-style-type: none"> • Describe which best value metrics have been applied to the solution within regional plans and individual company WRMPs. • Provide a summary of the best value metric evaluation outcomes including: <ul style="list-style-type: none"> ○ weights and scoring applied ○ non-monetised and monetised best value benefits (where possible) consistent with WRMP24 Table 5 for the solution within each company WRMP and regional plan where the solution appears. ○ any significant differences in best value assessment evaluation outcomes for the solution between plans should be identified and explained <p>This will be required by the regular checkpoint in December 2023</p>
4	Drinking Water Quality	<p>Provide evidence and outcomes of liaison with company drinking water quality teams to RAPID and identify any potential issues already included in current Drinking Water Safety Plans (DWSPs) by regular checkpoint in December 2023.</p>
5	Solution Design	<p>Confirm that the solution aligns with Severn Trent and Thames Water's Water Resource Management Plans (WRMPs) and relevant Regional Plans. This will be required by the regular checkpoint in December 2023.</p>
6	Programme and Planning	<p>Review the technical discreteness assessment following Ofwat's consultation of its latest technical discreteness guidance and provide an updated assessment. This will be required by the regular checkpoint in December 2023.</p>

Actions – to be addressed in standard gate three submission		
Number	Area	Detail
1	Programme and Planning	Further information is required regarding the proposed advanced treatment processes and on the significance of the depleted reach to fully understand the overall risk to the environment.
2	Programme and Planning	Explain in more detail how risks 31 and 32 identified in the gate two submission are addressed by gate three activities in the programme plan.
3	Drinking Water Quality	Liaise with water company drinking water quality teams to identify any potential issues already included in current Drinking Water Safety Plans (DWSPs).
Recommendations		
Number	Area	Detail
1	Solution Design	Continue to explore opportunities to transfer water to other regions.
2	Solution Design	Present utilisation information more clearly to show the normal year annual average, dry year annual average and dry year critical period. This will help clarify the difference between when Netheridge is used for sweetening flow, and when it is used to meet demand for WRSE.
3	Solution Design	Provide utilisation for other return periods to understand how the source will be used during different events.
4	Costs and Benefits	Describe how and why solution costs are changing between each gate.
5	Costs and Benefits	We would positively view further feasibility investigations at gate three into the use of wetland treatment for low-level flow.
6	Costs and Benefits	Explain the solution benefits in more explicit detail. RAPID would welcome a deep dive session before the regular checkpoint in December 2023 to understand the best value metrics in more detail across all three Severn to Thames Transfer system solutions (STT and NWT).
7	Costs and Benefits	Evidence that scores and metrics are in line with relevant WRMPs. We are recommending a deep dive session is held on the metrics and wider benefits assessments across all three solutions in the Severn to Thames Transfer system (including Severn to Thames Transfer and North West Transfer).
8	Environment	<p>Future carbon assessments would benefit from the inclusion of the following points;</p> <ul style="list-style-type: none"> • a range of uncertainties and a plan to mitigate them; • clarity on the calculation process (emission factors are missing); • plan to seek the availability of low carbon material; • information on the reporting of operational carbon emissions post project completion; and

		<ul style="list-style-type: none">• how carbon savings have helped to mitigate the solution costs.
9	Drinking Water Quality	Share monitoring data with Drinking Water Quality teams and provide confirmation of ongoing liaison.

Appendix B: Gate one actions and recommendations

Actions – addressed in standard gate two submission			
Number	Area	Detail	RAPID assessment outcome
1	Solution Design	Ensure that further detailed utilisation calculations are undertaken early in gate two in order to feed into environmental assessments.	We consider Severn Trent Water to have provided sufficient evidence of progress in addressing this action.
2	Costs and Benefits	Complete drought resilience modelling, taking into account possible restrictions resulting from the 'River Severn Drought Order', which applies to the Mythe abstraction licence.	We consider that this action is now no longer applicable because Mythe water treatment works has now been removed from the solution.
3	Costs and Benefits	Ensure that best value analysis (following relevant guidelines) is undertaken and presented for all options within the solution, with a focus on incorporating environmental, societal, and economic costs. Link into discussions of best value of this and other enabling solutions for dependant solutions (e.g. Severn Thames Transfer).	We consider Severn Trent Water to have provided sufficient evidence of progress in addressing this action.
4	Environment	Update status and deterioration risks under the (Water Framework Directive) (England and Wales) Regulations 2017, with particular attention paid to: Class used; standards used; Chemicals; <10% deterioration; Impact at permit limits.	We consider Severn Trent Water to have provided sufficient evidence of progress in addressing this action. The updated gate two Water Framework Directive assessment addressed this issue.
Recommendations			
Number	Area	Detail	RAPID assessment outcome
1	Solution Design	Develop utilisation figure during key drought events (such as 1:500 year events). This development would require input from other solutions/ regional models. Ensure lead in time for supply, dependent on solutions stand-by operating status, is represented in any receiving solutions decision making.	We consider Severn Trent Water to have provided sufficient evidence of progress in addressing this recommendation.
2	Solution Design	Further engage customers on change of supply source as a result of implementing this solution.	We do not consider Severn Trent Water to have provided sufficient evidence of progress in addressing this recommendation. The submission only references that a "new consultation on

			water transfers will be launched to understand stakeholder views on the impacts of changes of water supply, and understand their opinions on the specific SRO proposals under consideration." No detail has been provided on what has been done so far.
3	Costs and Benefits	Further consider social and amenity value, if this is limited due to type of solution, this can be explained in the submission.	We do not consider Severn Trent Water to have provided sufficient evidence of progress in addressing this recommendation. We could find no evidence of the consideration of social and amenity value of the solution.
4	Costs and Benefits	Further investigate potential opportunities of wider resilience benefits brought about by specific options within this solution. We recognise types of solution may limit the opportunities available.	We do not consider Severn Trent Water to have provided sufficient evidence of progress in addressing this recommendation. We could find no evidence that Severn Trent Water have investigated potential opportunities of wider resilience benefits brought about by specific options within this solution.

**Ofwat (The Water Services Regulation Authority)
is a non-ministerial government department.
We regulate the water sector in England and Wales.**

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