

June 2023

**Strategic regional water  
resource solutions:  
standard gate two final decision  
for North West Transfer**

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## 1. Introduction

The purpose of this publication is to set out our final decision about whether the North West Transfer<sup>1</sup> solution should continue to receive development funding<sup>2</sup>. The solution owner United Utilities (UU) submitted their standard gate two reports on 14 November 2022 for assessment. Further information concerning the background and context of the United Utilities North West Transfer can be found in the North West Transfer publication document on the United Utilities website<sup>3</sup>.

This publication should be read in conjunction with the final decision letter issued to each solution owner. Both this document and final 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 and Natural Resources Wales (for solutions involving Wales), 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.

The solution owners and other interested parties had the opportunity to respond to the draft decision during the representation period, which followed the publication of the decisions on 30 March 2023. We have taken all relevant representations into account in making our final decision.

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

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<sup>1</sup> Referred to in PR19 final determination as "North West Transfer"

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

<sup>3</sup> [United Utilities - Water Transfers – RAPID Submission](#)

## 2. Solution Summary

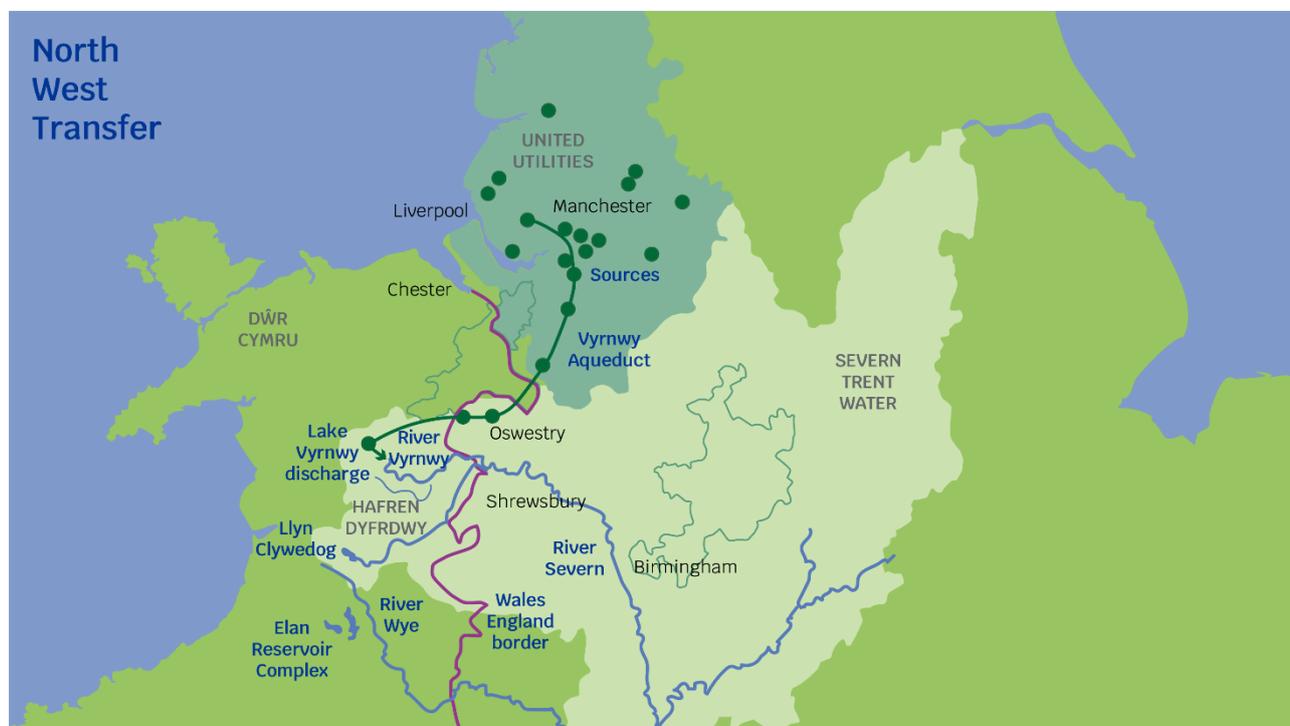
### 2.1 Solution summary

The North West Transfer (NWT) enables a transfer of water from the North West of England to the South. The solution forms part of the wider Severn to Thames Transfer system composed of NWT, River Severn to River Thames Transfer (STT) and Severn Trent Sources (STS). NWT is composed of:

- A portfolio of individual groundwater and surface water source options to maintain appropriate additional water treatment works output capacity to offset water exported from Lake Vyrnwy.
- Enabling works on the Vyrnwy aqueduct to maintain supply to customers in the North West.

NWT relies on the River Vyrnwy bypass pipeline construction works which are promoted under STT.

**Figure 1. North West Transfer Solution Schematic**



## 3. Summary of representations

### 3.1 Representations received

We have received the following representations relevant to the North West Transfer.

**Table 1. Summary of representations**

Representation from	Summary of representation
<b>Mersey Rivers Trust (MRT)</b>	<p>Representation focuses on elements of NWT that affect the River Mersey Catchment. It supports the draft decision to continue development funding but raises the following points:</p> <p><b>Construction ready timescale</b></p> <ul style="list-style-type: none"> <li>For some of the proposed new water source elements there is concern that these cannot be construction ready by 2027 due to the necessary investigations and permits etc required.</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>Fundamental concern regarding the inclusion of the River Irwell and River Bollin direct river abstractions, due to the environmental impact and chemical pollution risk of each river. Suggest other sources should have been considered. (Table 2). No concerns regarding the proposed groundwater abstraction source.</li> <li>Do not consider that sufficient progress has been made to identify the specific environmental risks of preferred supply options and to ensure issues and mitigation measures are well understood. Issues flagged by MRT in 2024 Water Resource Management Plan (WRMP24) response have not been addressed or investigated sufficiently.</li> </ul> <p><b>Drinking water quality</b></p> <ul style="list-style-type: none"> <li>Agree with the need for extensive water quality monitoring plan as set out as a priority action, but request that work starts during 2023, rather than just a plan being produced. This links to the cost/benefit assessment which they suggest may underestimate the costs required to address the drinking water quality risks.</li> </ul> <p><b>Best value planning</b></p> <ul style="list-style-type: none"> <li>Do not agree that NWT as currently scoped provides best value to address national water resource challenges (linked to issues raised above).</li> </ul> <p><b>Stakeholder engagement</b></p> <ul style="list-style-type: none"> <li>Concern that they have not been engaged about the details but are willing to do so, particularly to discuss their concerns</li> </ul>

	<p>and understand the scope of the water quality and environmental studies.</p> <ul style="list-style-type: none"> <li>Request stakeholder engagement is stepped up substantially, equal engagement across England and Wales and not limited to producing the plan, but demonstrating delivery, including engagement with greater Manchester and Cheshire.</li> </ul> <p><b>Wider costs and benefits</b></p> <ul style="list-style-type: none"> <li>Request that this is developed further than just environmental benefits and to include a more detailed Water Framework Directive (WFD) assessment and address associated impacts on the river system.</li> <li>Offer to assist United Utilities in assessing River Irwell and River Bollin scheme impacts on the river environment.</li> </ul> <p><b>Decision making</b></p> <ul style="list-style-type: none"> <li>Suggest that a conditional review point should be set given the risks identified.</li> </ul>
<p><b>Group Against Reservoir Development (GARD)</b></p>	<p><b>Solution design</b></p> <ul style="list-style-type: none"> <li>Gate two decision report should require a properly evidenced and transparent assessment of the amount of United Utilities replacement sources needed for the various options for Vyrnwy support for the STT. This should form part of the evidence needed for the interim STT checkpoint.</li> </ul>
<p><b>United Utilities (UU)</b></p>	<p><b>Gate timing</b></p> <ul style="list-style-type: none"> <li>Request confirmation that gate three timing amendment is to Q1 2025, so by end of March 2025.</li> </ul> <p><b>Decision making</b></p> <ul style="list-style-type: none"> <li>Welcome RAPID’s agreement to proposed introduction of a Conditional Review Point during gate three to allow recalibration of the NWT Strategic Resource Option (SRO) programme to reflect the outcome of Revised Draft WRMPs</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>Appendix 1 outlines how the priority actions will be addressed as part of their gate three programme. UU note that as explained in the appendix not all mitigation actions related to priority action 3 (G20003) will be completed by December 2023 and therefore they ask for confirmation that the proposed environmental programme is acceptable.</li> </ul> <p><b>Funding</b></p> <ul style="list-style-type: none"> <li>Acknowledge the increase for gate three but point out that that amount would not allow development of a “full solution”. Recognise that the final round of regional reconciliation indicates a significantly lower volume will be selected in WRMP preferred plans and therefore the additional funding is unlikely to be called upon. If it does become a preferred or accelerated pathway, further funding may be sought.</li> </ul>

	<ul style="list-style-type: none"> <li>• Note that the funding for AMP8 (for any remaining gate three activities, gate four and construction) will be determined through the 2024 price review (PR24) process and that is expected to include mechanisms for managing uncertainty across the SRO portfolio. They request that RAPID's final response confirms this principle, as this will be essential to enabling them to fund additional work in this area, should it be required. Table 1 in UU's representation shows the summary of gate one and gate two actual expenditure and confirms a slight underspend.</li> </ul> <p><b>Proposed activity to address priority actions</b></p> <ul style="list-style-type: none"> <li>• Appendix 1 of the representation sets out the proposed responses for the priority actions one to six, set out in the draft gate two decision document that will be undertaken during gate three.</li> <li>• To address priority action one, the solution owner plans to update stakeholder and customer engagement plans and will cover the points raised. The plans will also be aligned with the STT SRO and Water Resources West (WRW) to ensure a common approach to the joint outputs.</li> <li>• To address priority action two, the solution owner plans to arrange a technical meeting with RAPID, WRMP and EA (via NAU as facilitator of environmental regulator views including NRW where relevant) to explain in detail the methodology behind the modelling used to calculate the backfill volume.</li> <li>• In order to address priority action three, the solution owner does recognise and agree that there remain risks to the environmental sustainability of the NWT SRO full solution and that these risks have to be resolved before abstraction licences can be obtained for the river sub-options and one groundwater sub-option, and before abstraction is increased at the remaining groundwater abstractions. As noted in the action, they have a comprehensive plan of work underway to understand and mitigate these risks. This was set out at high level in the Forward Plan in the gate two Initial Environmental Appraisal Report and since then a series of method statements and scoping reports have been drafted and consulted on with the National Assessment Unit (who operate as a facilitator to gather views across the environmental regulators (EA/NE/NRW)) to ensure the surveys, modelling and assessments are sufficient to resolve the risks. Further details on the programme for these investigations have been presented to the NAU during their regular monthly engagement meetings for the Environment Workstream in the early part of 2023. They have a two-year programme of investigations which started in November 2022 with the first macroinvertebrate survey and will continue to the end of 2024 before full gate three in January 2025 (now agreed as March 2025). This means that the</li> </ul>
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	<p>mitigation measures will not be fully complete by the regular RAPID checkpoint in December 2023, but they anticipate that they will be progressed sufficiently that the risks to environmental sustainability of the SRO will be reduced to a low level. This process will involve working closely with the NAU to ensure they are satisfied with the level of investigation that can be completed in 2023 and is onboard with the methodologies, the results produced, and the level of risk that will remain at the December 2023 checkpoint. This is underway through monthly meetings plus additional meetings on technical topics. Key to this is population of the Joint Issues Log and agreement of this between United Utilities and the NAU.</p> <ul style="list-style-type: none"> <li>• The solution owner states that polyfluoroalkyl substances (PFAS) analysis is included in their monitoring of the raw water sources currently underway as part of their gate three programme and will continue to evolve guided by the outcomes of this exercise. Appropriate mitigation plans will also be developed alongside this monitoring activity. As new and emerging contaminants of concerns are identified, analysis will commence in alignment with the existing operational raw water sources and be managed through the same process.</li> <li>• To address priority action five, the solution owner will develop raw water Drinking Water Safety Plans (DWSPs) throughout the second half of 2023, based on raw water monitoring and desktop catchment assessments. High level treatment DWSPs will also be produced by December 2023 based on the latest solution design and comparable existing assets.</li> <li>• To address priority action six, the solution owner will continue to work closely with Severn Trent Water, Thames Water and the relevant Regional Plans to ensure consistency. The NWT SRO currently aligns with the regional reconciliation completed in April 2023.</li> </ul>
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## 3.2 Our response

We have taken the representations into account in our final decisions and set out below our response to the key points and issues raised. For the representations or parts of representations which indicate support, provide information, or give an update without raising key points and issues, we do not provide a response below but are grateful for the comments provided and confirm that we have also taken these into account.

### **3.2.1 Construction ready timescale**

The solution sets out its proposed timeline for the complete programme of work including obtaining the required permissions. Gate three of the RAPID programme represents a checkpoint on the way to solutions being prepared for Development Consent Order (DCO) or Town and Country Planning Act (TCPA) applications. Beyond gate three, the timings become more dependent on external factors such as the planning application and/or DCO process. The solution through its regular checkpoints with RAPID and partner regulators will advise if their programme of work needs to change. Construction cannot start until the relevant permissions are obtained.

### **3.2.2 Best value planning**

Whilst there was consideration of best value through the RAPID gate two, the best value for addressing national water resource challenges is determined through the regional water resource planning processes and water company water resource management plans.

Gate three of the RAPID process is where the solutions' submissions should include a summary of the best value considerations relevant to the preferred option for each solution included in all the individual company WRMPs and regional plans where the solution appears. This should include the consideration of financial cost and how it will achieve an outcome that increases the overall benefit to customers, the wider environment and overall society. Benefits to consider could include any amenity or recreation value, regional economic impact, multisector benefits, and other societal benefits.

### **3.2.3 Stakeholder Engagement**

The priority action on stakeholder engagement applies to both England and Wales. We have edited the wording of the priority action to clarify this point. RAPID will use the regular checkpoint meetings with the solution owner to check in on the engagement plan development as well as its delivery. Stakeholder engagement will likely start before December 2023 and will continue past this checkpoint. Progress will continue to be monitored at regular checkpoint meetings through gate three. There will be more stakeholder engagement in gate three as solutions are required to include in their submission:

- Pre-planning statutory consultation as outlined in as described in The Planning Inspectorate Advice Note 11: [working with public bodies in the infrastructure planning process](#) and Annexes A-H<sup>4</sup>
- Plans showing ongoing and continued engagement, that have been shared with public and statutory bodies, including any required enhanced advisory services.
- Customer engagement, particularly on changes of source where relevant.
- Engagement with all stakeholders affected by the solution's development.

### 3.2.4 Wider costs and benefits

We agree that additional benefits to the local community and the environment are an important aspect of the RAPID solutions. The assessment was considered sufficient for gate two. However, solution owners will continue to investigate opportunities to realise the wider benefits that could be developed as part of the solution during gate three.

### 3.2.5 Environment

Extensive environmental assessment and modelling has been undertaken and largely meets expectations for gate two. Whilst the gate two submission has identified potential risks from the solution, more work is required to understand the significance of these impacts and the extent to which they can be mitigated. In our gate two decision, we have required the solution owner to complete a number of priority actions related to these concerns before the December 2023 checkpoint.

We will work with United Utilities at regular checkpoint meetings to agree what is required and what progress is being made in respect of priority action three. We have revised the text of priority action three to clarify what we expect from United Utilities at the December 2023 checkpoint. We have also added corresponding text to section 4.4.4 of the final decision document.

### 3.2.6 Solution design

We have requested in priority action 2 that the company undertakes sensitivity analysis to provide confidence that the total solution backfill provides the required supply benefits for United Utilities customers. This will be required by the regular checkpoint in December 2023. At gate three, solutions will present more detailed information on the volumes of water

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<sup>4</sup> <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

needed and sources for that water based on outcomes from final water resource management plans and regional plans.

### **3.2.7 Drinking water quality**

The raw water monitoring programme and drinking water safety planning are already underway as part of the gate three programme. The monitoring programme and drinking water safety planning will inform the solution of requirements to ensure that drinking water quality regulations and standards are met.

In terms of the costs associated with the monitoring and water treatment, which a stakeholder thinks are underestimated, the solutions are only at the concept design stage. As they move through gate three, they will refine water treatment and monitoring requirements which will improve costs information.

### **3.2.8 Decision making**

We have created the option of a conditional review point before gate three for schemes that are at significant risk of change through further development of the relevant WRMPs and/or where other significant issues may affect the future progress of the schemes, NWT is one of those schemes. This enables the solution to provide updated information on these matters and, if necessary, for Ofwat at the conditional review point to make a further decision on whether the solution should progress further and, if so, the terms on which it should progress.

### **3.2.9 Funding**

We have considered the representations made on the gate three allowance and have considered further the interests of customers over the lifecycle of the solution's development and delivery. As a consequence, we have decided to increase funding for gate three. We will consider gate four expenditure either as part of the gate three decision or PR24, as appropriate.

We have adjusted Table 4 of the final decision to reflect these changes and have added some explanatory text to section 4.2.

### **3.2.10 Gate timing**

We confirm that, in alignment with STT and STS, gate three is March 2025, but the solution owners must advise RAPID of any further proposed changes to this.

### **3.2.11 Proposed activity to address priority actions**

We welcome the submission, within the solutions representation, of information on the proposed response activities to the priority actions. We will work with United Utilities at regular checkpoint meetings to agree what's required and what progress is being made.

We acknowledge the response to priority action four (G2004) but expect the company to adhere / follow the All Company Working Group (ACWG) methodology for monitoring of chemicals of emerging concern (CEC) plus any additional parameters identified in the risk assessment.

## **3.3 Other changes to our draft decisions**

### **3.3.1 Areas that we have changed not as a result of a representation**

We have reworded the solution summary (2.1) at the start of the document to remove reference to the Shrewsbury redeployment source option which was ruled out as part of the STT solution during gate two.

We agree that during the query response period, the solution owner satisfied the requirements of recommendation 5 in their query response NWT010, so we are deleting the recommendation from the final decision document and renumbered recommendations in the final decision document accordingly.

We have decided that the best value deep dive session as described in recommendation 4 in the draft decision document should be attended by NWT only, rather than all three solutions related to the STT system. This will provide an opportunity to focus solely on the best value aspects of NWT which are most relevant to the solution progression. We have therefore reworded recommendation 4 in the final decision document.

We are removing the cost sharing arrangements for gate three which were in our draft decision and are instead capping the allowance at a higher level. We have added some explanatory text to section 4.2 to explain this.

To support our decision on whether to set a Conditional Review Point, we have set a new priority action to report on the expenditure incurred up to December 2023 and a revised forecast of expenditure to gate three, for RAPID to consider alongside progress against the other priority actions in Appendix A.

## 4. Solution assessment summary

Table 2. Final decision summary

Recommendation item	North West Transfer
Solution owners	United Utilities
Should further funding be allowed for the solution to progress to gate three?	Yes, subject to any decisions taken at a Conditional Review Point
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 5.1.
Are all priority actions and actions from previous gates addressed?	No, set out in section 5.2.
Suitable timing for gate three has been proposed	RAPID have agreed gate three as March 2025 to align with other related solutions.

### 4.1 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 United Utilities' submissions in response to the priority actions set out in Appendix A at the regular checkpoint with United Utilities 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 progress 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 3 below.

Decisions on funding as a result of this progression decision, are set out in section 4.2.

Figure 2. Assessment of solution's progression concerns

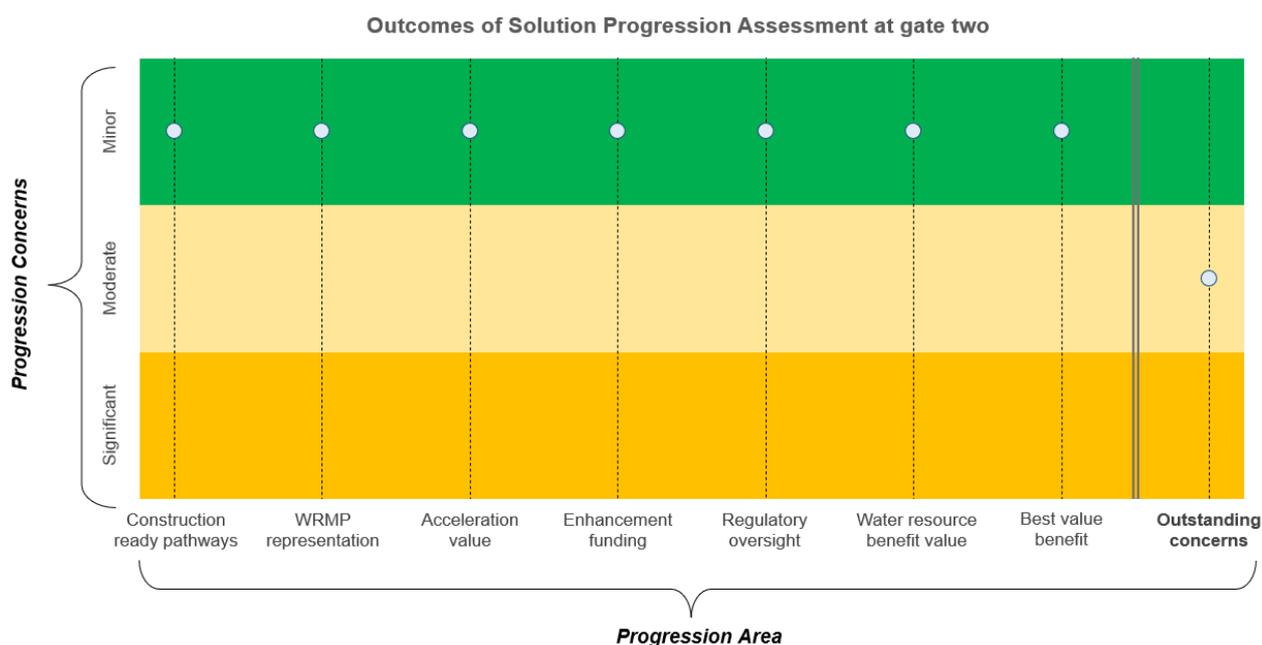


Table 3. Final decision progression criteria

Progression criteria	North West Transfer
<b>Solution owners</b>	United Utilities
<b>Is the solution in a preferred or alternative pathway in relevant regional plan or WRMP (where applicable) to be construction ready by 2030?</b>	Yes, the solution is chosen in Thames Water, United Utilities' and Severn Trent Water's draft water resource management plans (WRMPs) as an option in the preferred pathway. The solution is also in the Water Resources South East (WRSE) and Water Resources West (WRW) draft regional plans. The solution will be construction ready by 2027.
	No further action is required on this progression criteria.
<b>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?</b>	No, the regulators do not have any significant concerns with how the solution is represented, or the information about it, in the WRMPs or regional plans.
	No further action is required on this progression criteria.
<b>Is there value in accelerating the solution's development to meet a company's or region's forecast supply deficit?</b>	Yes. A solution is required to address forecast deficits for Severn Trent Water, United Utilities, Thames Water, WRW and WRSE.
	No further action is required on this progression criteria.
<b>Does the solution need continued enhancement funding for investigations and development to progress?</b>	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.

<b>Does the solution need the continued regulatory support and oversight provided by the Ofwat gated process and RAPID?</b>	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.
<b>Does the solution provide a similar or better cost / water resource benefit ratio compared to other solutions?</b>	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.
<b>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?</b>	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.
<b>Does a regulator or regulators have outstanding concerns that have not been addressed through the strategic planning processes taking into account proposed mitigation?</b>	Outstanding concerns remain around stakeholder engagement, environmental assessments including Water Framework Directive (WFD) compliance, water quality monitoring and socio-economic benefits for Wales.
	This progression concern is addressed in priority actions in Appendix A of this document.

## 4.2 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 4 below, and details on forward programme in section 8.1.

**Table 4. North West Transfer funding allowances (2017/18 Prices)**

	Gate one	Gate two	Gate three	Gate four	Total
<b>North West Transfer gated allowance</b>	£2.19m	£3.29m	£11.58m	£8.76m	£25.82m
<b>Comment</b>	10% of development allowance calculated as 6% of total solution costs	15% of development allowance calculated as 6% of total solution costs	Allowance has been revised and capped.	We will review gate four expenditure as part of gate three assessment or PR24.	Updated to reflect revised gate three expenditure cap.
<b>Previous Allowance</b>	£2.19m	£3.29m	£7.67m	£8.76m	£21.90m
<b>Change from Previous Allowance</b>	£0.00m	£0.00m	£3.92m	£0.00m	£3.92m

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.

The North West Transfer will be allowed to spend up to £11.58 million to undertake gate three activities, representing an increase of £1.37 million from our draft decision. This figure has been reached based on funding 100% of the forecast costs for gate three. We are not amending the gate four allowances at this point.

We are removing the cost sharing arrangements for gate three which were in our draft decision and are instead capping the allowance at a higher level. This means that the solution may pass on the costs of gate three development but only up to the higher cap. The solution will be allowed to use its previous underspends to offset expenditure above the cap to provide some flexibility against cost uncertainty.

These arrangements will be implemented through the PR19 reconciliation mechanism. The impact on the solution owner(s) of any expenditure above or below the cap will depend on the extent to which the solution was already funded at PR19.

The solution may bring forward some gate four activities, which can be funded from the gate four allowance. There must be a clear rationale for undertaking the expenditure early, including evidence of the benefits of doing so instead of waiting for greater solution certainty.

We confirm that any funding for AMP 8 will be decided through the PR24 process.

### **4.3 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.

North West Transfer carried forward £0.56m underspend from gate one, increasing the allowance available to them at gate two to £3.84m.

Our assessment of the efficient costs as spent on standard gate two activities results in an allowance for this solution of £3.23m (of £3.23m claimed). North West Transfer has therefore underspent its combined gates one and two allowance by £0.61m 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 £12.19m.

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. As North West Transfer is progressing to gate three, this will apply here, subject to any decisions taken at a Conditional Review Point.

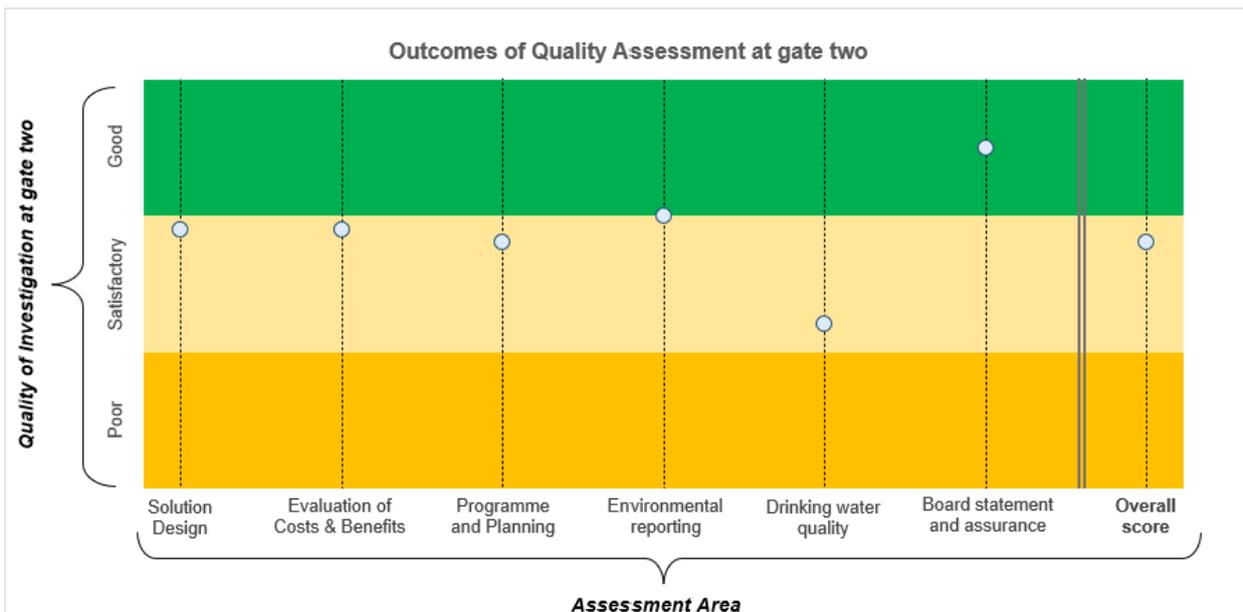
We expect United Utilities to provide a report on the expenditure incurred up to December 2023 and a revised forecast of expenditure to gate three.

## 4.4 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 satisfactory submission that meets expectations of gate two.

In addition to the overall assessment score, there is some variance in expectations being met across the submission, with the following areas falling short of expectations and not as developed as would be expected at gate two:

- stakeholder and customer engagement,
- wider resilience benefits,
- procurement and planning route strategy,
- identification of environmental risks and potential mitigation measures,
- drinking water quality considerations and risk assessments, and
- plans for future work to develop Drinking Water Safety Plans.

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 6.

#### 4.4.1 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 United Utilities 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 area of utilisation, therefore we recommend a discussion with RAPID early on in gate three to:

- clarify within-zone resilience needs and whether they are already considered, or may affect, the utilisation figures presented.
- understand the utilisation of Severn Trent Water's trade option to support future environmental assessments and permit requirements.

Stakeholder and customer engagement requires further development. We recognise and welcome the work carried out for gate two, including engagement with the Wales Water Forum. However, this related predominantly to strategic engagement and primarily uses the Water Resources West regional plan engagement work. The development of an engagement plan must occur before the gate three submission. This needs to include who, where, how and why Welsh stakeholders will be engaged. This should include the wider Welsh statutory regulators like Cadw / Planning and Environment Decisions Wales (PEDW) using a "no surprises" approach. The engagement plan should be provided by the regular checkpoint with United Utilities 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. This engagement plan, in conjunction with Severn to Thames Transfer, should address the 25% of stakeholder reported feedback that was negative towards water transfers.

Alignment with company, regional and national plans require 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 recommend that this update includes justifying the needs case for the transfer and describes the interactions with the Severn to Thames Transfer system in more detail, including any assumptions and dependencies.

#### **4.4.2 Solution costs**

Our assessment of the unit costs of delivering North West Transfer finds that the costs presented 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, in order to achieve the required minimum backfill of 167 megalitres per day (Ml/d), further sub-options were included in the gate two assessment that were more costly to implement. The 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.

#### **4.4.3 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 United Utilities have provided partially sufficient evidence of evaluating the costs and benefits of the solution to an appropriate standard for gate two.

They have fallen short in providing enough evidence in social, environmental and economic costs and benefits, as the best value metrics and weightings may not fully deliver for wider socio-economic and cultural costs/benefits. By gate three we expect United Utilities to have considered wider benefits including, but not limited to, jobs, health, supply chain, local economies and community regeneration. If there are any aspects in or affecting Wales, then these broader aspects must be considered for the [Well-being of Future Generations \(Wales\) Act 2015 \(legislation.gov.uk\)](#) and as part of the ecosystem services costs and benefits under the [Environment \(Wales\) Act 2016: biodiversity and resilience of ecosystems | GOV.WALES](#).

We also recommend that for the gate three assessment United Utilities should present the quantitative steps used to assess the ecosystem services, such as tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) for climate regulation, visitor numbers for recreation and tourism, and an asset register of habitats for the scenarios pre- and post- construction, and with off-site mitigation and for any additional ones brought in.

The solution falls short in some areas regarding water resources benefits. Additional evidence for water resources benefits is required by gate three. Sensitivity analysis must be undertaken to provide confidence that the total solution backfill of 167 Ml/d is sufficient to provide the required supply benefits to its customers.

We welcome that United Utilities discusses a range of potential wider resilience benefits. The solution would benefit from progressing these potential opportunities further to give site or source-specific opportunities, including linking through to work on biodiversity opportunity mapping.

We would welcome a deep dive session early in gate three across all three STT system solutions (including STT and STS) to 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.

#### **4.4.4 Programme and Planning**

Our assessment of the Programme and Planning considered whether United Utilities 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 United Utilities regarding the programme and planning, risks and issues and the procurement and planning route strategy for the North West Transfer to be partially sufficient in terms of its detail and quality for gate two. Additional work is required around risks and issues to solution progression due to concern around the environmental sustainability of sub-options and non-compliance with the Water Framework Directive.

While the programme and planning score has been marked down as requirements that solution owners were funded to meet have not been met, we have made a decision that there is no longer a need for value for money assessments for RAPID solutions and therefore no associated gate two action is required.

The evidence provided for subsequent gate activities with outcomes, penalty assessment criteria and incentives is lacking to an extent. There are several key risks which the solution proposes will be mitigated by stakeholder engagement. United Utilities should provide a more detailed explanation of how these mitigation activities are incorporated into the gate three plan. Overall, United Utilities should clarify the impact of all residual risks on their programme delivery.

We welcome United Utilities' progress on the gate one action to "identify the specific environmental risks of preferred supply options [and] ensure issues and mitigation measures are well understood". However, we have significant concerns about the considerable programme risk that remains because of uncertainty around the environmental sustainability of the preferred sub-options with regards to complying with the Water Framework Directive. Mitigation in the form of modelling, monitoring programmes and back up options have been identified but any delays to these programmes will put the solution delivery at risk. An initial assessment of and plan for implementation of mitigation measures should be completed by the checkpoint in December 2023. This is to allow time for unresolved risks to be managed by the end of gate three.

#### **4.4.5 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 United Utilities 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 for the most part. It is recommended that further consideration on its carbon assessment is undertaken by gate three.

As explained in section 4.4.4, we have concerns around risks and potential mitigations which is reflected in a priority action. Until further assessment of the preferred mitigations has been completed by United Utilities and the priority action has been addressed this environmental risk remains.

#### 4.4.6 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.

The submission does not meet the requirements of gate two and does not appear to have moved significantly from gate one. The strategic water quality risk assessments (SWQRA) are not as developed as would be expected. The submission acknowledges uncertainty around polyfluoroalkyl substances (PFAS) and Contaminants of Emerging Concern (CECs). However, there are no water quality data available for the limiting hazards – these are all assumed. We have therefore set a priority action for an extensive water quality monitoring plan, with timescales to ensure seasonal variation is captured, to be submitted. We expect United Utilities to demonstrate that this water quality monitoring plan will inform:

- its Drinking Water Safety Plan (DWSP);
- stakeholder engagement around source changes and
- a plan that includes sample location, parameters and frequencies in relation to further developing the DWSP.

We have also set two actions firstly, to complete the sampling programme to better inform the SWQRA and DWSP and secondly, to provide a more informative table to compliment the summary given in table 19. We expect United Utilities to address these actions by gate three.

#### 4.4.7 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 United Utilities 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.

In the NWT gate two submission the board requested “regulators to significantly develop the economic, legal and regulatory frameworks that will underpin the delivery and operation of the infrastructure to support the proposed trade”. RAPID is working with water companies through the Regulatory & Commercial (R&C) Steering Group, of which United Utilities is a member, to prioritise R&C decisions needed in time for gate three submissions.

## 5. 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 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. 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.

### 5.1 Actions and recommendations from gate two assessment

Seven priority actions have been identified for North West Transfer which should be delivered no later than the dates identified in appendix A as part of a remediation plan.

Twelve actions and recommendations have been identified for North West Transfer, which should be fully addressed at the gate three submission or at an alternative or earlier date where this has been set in Appendix A. 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 North West Transfer can be found in Appendix A.

### 5.2 Actions and recommendations from gate one assessment

We have assessed whether North West Transfer has met actions that were set out as a result of our gate one assessment.

No priority actions were identified for North West Transfer.

Fourteen actions and recommendations were identified for North West Transfer, 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.

## 6. 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.

## **7. Proposed changes to partner arrangements**

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

## 8. 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 United Utilities to complete the activities listed in [PR19 final determinations: strategic regional water resources solutions appendix](#), as expanded on in section 7.4 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.

### 8.1 Gate three timing

United Utilities have proposed a date for gate three of December 2024 with a proposed mid-gate three checkpoint in December 2023. This is proposed alongside a forward programme of gate four in October 2026, solution construction ready in early 2027, and solution operational in late 2033.

We have decided that North West Transfer's gate three should be March 2025. This is to align 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 also decided that there may be a Conditional Review Point. After we have considered United Utilities' submissions in response to the priority actions set out in Appendix A at the regular checkpoint with United Utilities in December 2023, we will confirm to United Utilities 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 the company holds with us.

We agree with your forward programme for gate four.

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 4.2 of this document.

## 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 RAPID a detailed plan for stakeholder and customer engagement (strategic and local). This plan should:</p> <ul style="list-style-type: none"> <li>• explain how customer and stakeholder views, including stakeholders in Wales, have informed and will inform key decisions.</li> <li>• demonstrate how relevant local, strategic, and regulatory stakeholders are consulted, including those in Wales e.g., Cadw/PEDW/Hafren Dyfyrtyw.</li> <li>• explore the gate two engagement feedback that 25% of stakeholders were negative towards water transfers, identifying any implications for the solution progression.</li> <li>• clarify the extent to which results from WRW online consultation on transfers through Idea Stream platform influenced solution design; and</li> <li>• seek views from Consumer Council for Water and explain subsequent actions as a result of this engagement.</li> </ul> <p>This will be required by the regular checkpoint in December 2023</p>
2	Costs and Benefits	<p>Undertake sensitivity analysis to provide confidence that the total solution backfill provides the required supply benefits for United Utilities customers. This will be required by the regular checkpoint in December 2023.</p>
3	Programme and Planning	<p>Considerable risk remains to the environmental sustainability of the preferred sub-options with regards to complying with the Water Framework Directive. Mitigation measures, in the form of modelling, monitoring programmes and developing backup sub-option portfolios, have been identified in the gate two submission. The delivery of these mitigation measures is pivotal to ensure sustainable solutions are included in any final regional and water resources management plans.</p> <p>By the regular checkpoint in December 2023, submit an initial assessment of and plan for implementing mitigation measures that will reduce the environmental impacts and risks of the solution. Consult the NAU (facilitator of Environment Agency, Natural England and Natural Resources Wales input) on the deliverables for the initial assessment and plan, prior to the submission at the regular checkpoint in December 2023.</p>
4	Drinking Water Quality	<p>Submit a monitoring plan that demonstrates how the uncertainty around the risk of polyfluoroalkyl substances (PFAS) and contaminants of emerging concern (CECs) will be reduced. This will be required by the regular checkpoint in December 2023.</p>
5	Drinking Water Quality	<p>Submit a plan to further develop the Drinking Water Safety Plan (DWSP) including sample locations, parameters and frequencies. This will be required by the regular checkpoint in December 2023.</p>

6	Solution Design	Confirm to RAPID that the solution aligns with Thames Water, United Utilities and Severn Trent Water's Water Resource Management Plans (WRMP) and relevant Regional Plans. This will be required by the regular checkpoint in December 2023.
7	Evidence of efficient spend	At the regular checkpoint meeting in December 2023, provide a report to RAPID on the expenditure incurred up to December 2023 and a revised forecast of expenditure to gate three.
<b>Actions – to be addressed in standard gate three submission</b>		
<b>Number</b>	<b>Area</b>	<b>Detail</b>
1	Solution Design	Provide to RAPID further information on the utilisation of Severn Trent Water's trade option to support future environmental assessments and permit requirements. This will be required by the regular checkpoint in December 2023.
2	Costs and Benefits	Progress work on the extensive range of potential wider resilience benefits discussed, to give site or source specific opportunities, including linking through to work on biodiversity opportunity mapping.
3	Costs and Benefits	Ensure and evidence that all potential costs and benefits are considered across social, economic, environmental (and cultural where in or affecting Wales) when considering the wider costs/benefits. These should include, but are not limited to, jobs, health, supply chain, local economies and community regeneration.  If there are any aspects in or affecting Wales, then these broader benefits must be considered for the Well-being of Future Generations (Wales) Act 2015 and as part of the ecosystem services costs and benefits under the Environment (Wales) Act 2016.
4	Programme and Planning	Provide a more detailed explanation of how the stakeholder engagement mitigation activities are incorporated into the gate three programme plan.  Clarify and explain the impacts of residual risks (after mitigation) on programme delivery.
5	Drinking Water Quality	Provide a summary of the current drinking water quality risks at Lake Vyrnwy to give greater understanding of current baseline risks.
6	Drinking Water Quality	Complete a sampling programme to better inform the Strategic Water Quality Risk Assessment (SWQRA) and DWSP.
<b>Recommendations</b>		
<b>Number</b>	<b>Area</b>	<b>Detail</b>
1	Solution Design	Justify the need for the transfer and describe the interactions with the Severn to Thames Transfer system in more detail, including any assumptions and dependencies.
2	Solution Design	Provide information on how within-zone resilience needs are already considered, or may affect, the utilisation figures presented.

3	Costs and Benefits	Present the quantitative steps used to assess the ecosystem services, such as tonnes of carbon dioxide equivalent (tCO <sub>2</sub> e) for climate regulation, visitor numbers for recreation and tourism, and an asset register of habitats for the scenarios pre- and post- construction, and with off-site mitigation.
4	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.
5	Environment	<p>Future carbon assessments should include the following:</p> <ul style="list-style-type: none"> <li>• further information in the Carbon Annex on carbon estimations in different life cycle of the project;</li> <li>• further information on how they plan to seek the availability of low carbon materials in the supply chain;</li> <li>• further information in the Carbon Annex on carbon estimations in different life cycle of the project;</li> <li>• further evidence on how whole life carbon has been reduced within the design. United Utilities can provide the amount of carbon emissions that has been minimised by reusing the current infrastructure;</li> <li>• More information on whether they considered use of low carbon materials at gate two and any learning from that for what is proposed for gate three;</li> <li>• further information on how it plans to monitor the emissions post project completion;</li> <li>• a discussion on consideration of scope 1, 2 and 3 emissions (scope 3 emissions are missing).</li> </ul>
6	Drinking Water Quality	Provide a more informative table to compliment the summary given in table 19 of the main gate two submission report. This table should include sources of hazards to be included and what mitigation is expected to be used to bring the residual risk down or to the value given in table 19 of the main report.

## Appendix B: Gate one actions and recommendations

Actions – addressed in standard gate two submission			
Number	Area	Detail	RAPID assessment outcome
1	Solution Design	Refine the list of source options down to a preferred suite early in the gate two process, combining in portfolios as necessary for supply capacities. A manageable suite will allow for a full and detailed assessment to be completed during gate two. Progress and decisions on this action, including manageable numbers of preferred supply options, should be shared with regulators during checkpoint meetings.	We consider United Utilities to have provided sufficient evidence of progress in addressing this action.
2	Solution Design	Ensure that further detailed utilisation calculations are undertaken early in gate two in order to feed into the environmental assessment	Partially complete. We consider United Utilities to have completed further detailed utilisation of surface water sources. However, further work should be undertaken to understand utilisation of groundwater sources in gate three.
3	Solution Design	Ensure Welsh stakeholders and customers are included in solution specific engagement.	We do not consider United Utilities to have provided sufficient evidence of progress in addressing this action. Whilst there was stakeholder engagement at a strategic level in gate two (mostly through the WRW engagement process) and this did include the Wales Water Forum and local authorities, wider stakeholders and regulators such as CADW, etc and local stakeholders were not engaged. An engagement plan must be provided in gate three (see priority action 1).
4	Costs and Benefits	Further work is required on elements of the solution which impact on Welsh ecosystem resilience. This will achieve sustainable management of natural resources as well as helping to achieve goals set out in the Wellbeing of future Generations Act. Any proposal which has implications for Wales must meet the requirements of this Act and the Environment (Wales) Act. This is in addition to the natural capital and biodiversity net gain requirements for England.	We do not consider United Utilities to have provided sufficient evidence of progress in addressing this action. Whilst the solution has changed in gate two and there is no direct alteration of physical construction work in Wales, it will still be important to comply with these requirements where the solution could affect water resources in Wales, other environments and people. United Utilities should demonstrate that the Welsh legislative requirements have been considered, even if shown not to be relevant.

5	Costs and Benefits	Priority modelling and investigations should be carried out in relation to the 10 source options that concern Water Industry National Environment Programme (WINEP) studies and those source options with an impact on the River Dee SAC.	We consider United Utilities to have provided sufficient evidence of progress in addressing this action.
6	Programme and Planning	Provide further detailed evidence to support the programme plans and identify key milestones.	We consider United Utilities to have provided sufficient evidence of progress in addressing this action.
7	Programme and Planning	Continue to develop assessment of Direct Procurement for Customers (DPC), including detailed assessment of suitability against technical criteria. The submission should consider whether elements of the system are suited to DPC, for example specific sources or bundles/phases of delivery.	We consider United Utilities to have provided sufficient evidence of progress in addressing this action.
8	Environment	Initial environmental assessment should prioritise the 10 source options that concern Water Industry National Environment Programme (WINEP) studies and those source options with an impact on the River Dee SAC.	We consider United Utilities to have provided sufficient evidence of progress in addressing this action.
9	Environment	Identify the specific environmental risks of preferred supply options. Ensure issues and mitigation measures are well understood.	We consider United Utilities to have provided sufficient evidence of progress in addressing this action. During gate two preferred suite of options refined further. Risk remains regarding WFD and Habitats Regulation Assessment compliance.

**Recommendations**

<b>Number</b>	<b>Area</b>	<b>Detail</b>	<b>RAPID assessment outcome</b>
1	Solution Design	Stakeholder engagement at gate two should further explore customer acceptability into change of supply source	We consider United Utilities to have provided sufficient evidence of progress in addressing this recommendation. Information provided in NWT-G02-009-005 about customer acceptability.
2	Costs and Benefits	Studies should update all source option yields and model Deployable Output values from these yields, using WRMP19 figures. This work should be completed prior to the conclusion of the best value portfolios of source options. This work should be completed, as planned, during gate two.	We consider United Utilities to have provided sufficient evidence of progress in addressing this recommendation.

3	Costs and Benefits	Investigate source option-specific wider resilience opportunities at gate two. This will form part of the environmental resilience work planned for gate two.	The NWT team have provided further discussion on a number of areas that could see opportunities for wider benefits at the sources, and also note where there are limits to the wider benefit opportunities. The discussion does not provide detail of specific opportunities, and as such we recommend this work continues through gate three.
4	Programme and Planning	Include how interaction with other strategic solutions (particularly the River Severn to River Thames transfer) will be managed in the programme plan, including any key check-ins and alignment and sharing of key investigation outcomes.	We consider United Utilities to have provided sufficient evidence of progress in addressing this recommendation.
5	Environment	The main submission document needs to be clear on the methodologies and/or frameworks used to calculate, manage and mitigate GHG emissions. Clearly state how approach to carbon management is helping to deliver on WaterUK 2030 net zero route map and is aligned with the sector's ambition on carbon.	We consider United Utilities to have provided sufficient evidence of progress in addressing this recommendation. Gate two carbon assessment met expectations in most areas but further work required for gate three.

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