



ANNEX E3

Assurance Report

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**GRAND UNION CANAL & MINWORTH
EFFLUENT REUSE SRO**
RAPID Gate 2 – Third-line Assurance Report

25 October 2022

Prepared for:
Severn Trent, Affinity Water & the Canal & River Trust

Prepared by:
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Project Number:
330202122

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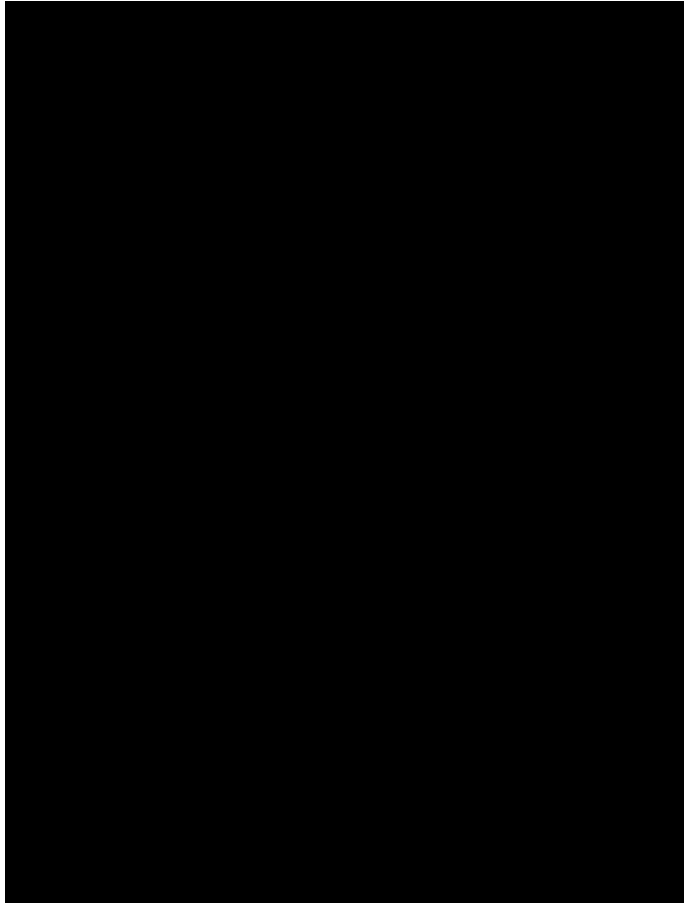


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Executive Summary

INTRODUCTION

Stantec was commissioned by Severn Trent, Affinity Water & the Canal & River Trust to provide independent third-line assurance on Grand Union Canal (GUC) and Minworth effluent reuse¹ Strategic Resource Options (SROs) from the period 17th March 2022 to 24th October 2022. This assurance process is part of the Regulators' Alliance for Progressing Infrastructure Development (RAPID) Gate 2 process for SRO schemes and will form part of the Board assurance statement.

The primary purpose of this Assurance Statement is to communicate our scope of work, the findings of our review, as well as any significant findings and recommendations that we believe are relevant to the submission.

SCOPE AND APPROACH

The scope of our assurance activities has been focused on the priority risks identified by the Client for GUC and Minworth. A risk-based approach to annex assurance was agreed with the Client company Board, as such, it should be noted that our assurance activities have been limited to the aspects of the scheme that have been identified by the Client as Critical or High risk.

There is a sample body of reports and documents that have been assessed by the Client as not requiring third-Line Assurance (Medium & Low risk). There has been no requirement for Stantec to review these documents via the third-line Assurance process. This limits the extent and depth of the third-line assurance completed by Stantec.

Through a series of meetings and reviews of documentation associated with each of the SRO chapters, we have assessed the following:

- actions and recommendations given by RAPID in their assessment of our Gate 1 submission have been addressed;
- The appropriate methodologies, guidance and policies used to develop the Gate 2 submission; and
- The submission is complete, accurate and appropriate for Gate 2.

Our assurance activities have been undertaken considering each of the Projects against meeting RAPID's Gate 2 requirements, RAPID's assessment criteria and technical robustness. Observations and issues were captured via a 'live' assurance log which was used to document findings against RAPID's assessment criteria. This log was used to manage the materiality and resolution of reporting issues before the final submission.

FINDINGS

Throughout the process the project teams have engaged with us in a constructive and supportive manner and have taken on board our comments and queries. Please refer to Table 1, for a summary of our third line assurance findings. A number of these items have been rated as Amber; this reflects where we have raised points about elements of the studies that have been undertaken, but do not materially impact Gate 2 submission. We are of the opinion that the documents are sufficient for the Gate 2 submission.

As external and independent assurers, we are subsequently satisfied that, based on the evidence presented and the limits of our scope, the submission is suitable for progression through Gate 2 into Gate 3 and are supportive of the proposed Board Assurance Statement with respect to the elements noted in Table 1 below.

¹ Minworth effluent reuse SRO is referred to as Minworth SRO throughout the report.

Table 1. GUC Summary Assurance Statement

Key	
Green	No or relatively minor issues.
Amber	An issue that does not impact on the Gate 2 submission that will be addressed at Gate 3.
Red	A material issue that impacts on the Gate 2 submission

Criteria:	Independent Opinion	Rating
As Third-Line Assurer, we have considered the data and approaches used to develop the concept design and decision-making information included within the Gate 2 submission and provide the following opinions against the following Board statement proof points		
1. Meets the requirements set out in Ofwat’s Final Determination, and subsequent additional feedback from Ofwat.	Based on the information reviewed to date, we are satisfied that the Gate 2 submission documents for the GUC SRO and Minworth SRO meet the RAPID Gate 2 assessment criteria.	Green
2. Have been subject to sufficient processes and internal systems of control to ensure that the information on design, costs and benefits contained in this submission are reliable.	We are satisfied that, through the first and second-line assurance undertaken, the Gate 2 submission has been subject to sufficient processes and internal systems of control. In some circumstances, second-line assurance was undertaken after Stantec’s third-line assurance, but this does not materially affect Gate 2 submission..	Amber
3. Have been appropriately assured to give our stakeholders, including customers, trust, and confidence in this Gate submission.	Stantec have undertaken independent third-line assurance which is risk-based, robust and thorough. Independent technical specialists or Subject Matter Experts (SME) relevant to the disciplines of each aspect of the submitted annexes have led detailed reviews. However, there is a sample body of reports and documents that have been assessed by the Project Partners as not requiring third-line Assurance (documents classed as Medium & Low risk). There has been no requirement for Stantec to review these documents via the third-line assurance process. This limits the extent and depth of the third-line assurance completed by Stantec.	Green
4. Have appropriately considered the feedback and opinion of independent external assurance partners.	All third-line assurance comments have been addressed via responses provided by the Partner Project Team (PPT) and accepted by our independent reviewers.	Green
5. Progress on the solution, to date, is commensurate with the timeline of being ‘construction ready’ in AMP8;	We are satisfied that progress to date still allows the solution to be ‘construction ready’ during AMP8. The program to being construction ready for AMP8 is achievable but will be challenging.	Green
6. Scope, detail and quality of the activities are such that would be expected of a large infrastructure scheme of this nature at this stage	From our third-line assurance activities, Stantec are satisfied that the scope, detail, and quality of the activities are satisfactory for Gate 2.	Green
7. Expenditure incurred in generating the Gate submission is efficient and relevant to the development of the submission	Stantec are satisfied the expenditure incurred in generating the Gate 2 submission is relevant to the development of the submission. We have though raised concerns with respect to the fact that 26% of the gate spend is on PM and Leadership costs and have made a recommendation that there is further increased control over internal staff costs at Gate 3. These points are similar to those that were raised in the Gate 1 assurance. [REDACTED]	Amber
8. Takes full account of greenhouse gas emissions in decision making. Operational and embedded carbon emissions are part of the ‘best value’ scheme assessment.	Greenhouse gas emission, Operational and embedded Carbon have all been considered as part of the solution assessment.	Green

Table 2: Minworth SRO Summary Assurance Statement

Criteria:	Independent Opinion	Rating
As Third-Line Assurer, we have considered the data and approaches used to develop the concept design and decision-making information included within the Gate 2 submission and provide the following opinions against the following Board statement proof points		
1. Meets the requirements set out in Ofwat’s Final Determination, and subsequent additional feedback from Ofwat.	Based on the information reviewed to date, we are satisfied that the Gate 2 submission documents for the Minworth SRO meet the RAPID Gate 2 assessment criteria.	
2. Have been subject to sufficient processes and internal systems of control to ensure that the information on design, costs and benefits contained in this submission are reliable.	We are satisfied that, through the first and second-line assurance undertaken, the Gate 2 submission has been subject to sufficient processes and internal systems of control. In some instances, second-line assurance was undertaken after Stantec’s third-line assurance, but this does not materially affect Gate 2 submission	
3. Have been appropriately assured to give our stakeholders, including customers, trust, and confidence in this Gate submission.	Stantec have undertaken independent third-line assurance which is risk-based, robust and thorough. Independent technical specialists or SMEs relevant to the disciplines of each aspect of the submitted annexes have led detailed reviews. However, there is a sample body of reports and documents that have been assessed by the Project Partners as not requiring third-line Assurance (Medium & Low risk). There has been no requirement for Stantec to review these documents via the third-line assurance process. This limits the extent and depth of the third-line assurance completed by Stantec.	
4. Have appropriately considered the feedback and opinion of independent external assurance partners.	All third-line assurance comments have been addressed via responses provided by the Partner Project Team (PPT) and accepted by our independent reviewers.	
5. Progress on the solution, to date, is commensurate with the timeline of being ‘construction ready’ in AMP8;	We are satisfied that progress to date still allows the solution to be ‘construction ready’ by AMP8. The program to being construction ready for AMP8 is achievable but will be challenging. As per Project Partner responses to assurance comment, scoping and procurement will need to commence ahead of the DCO decision on an ‘at risk’ basis and this will need to be flagged to RAPID. The appointment of DCO expert advisors will be required early on in Gate 3 to define linkage between environmental, engineering, procurement, and stakeholder workstreams and the planning & consenting process.	
6. Scope, detail and quality of the activities are such that would be expected of a large infrastructure scheme of this nature at this stage	From our third-line assurance activities, Stantec are satisfied that the scope, detail, and quality of the activities are satisfactory for Gate 2.	
7. Expenditure incurred in generating the Gate submission is efficient and relevant to the development of the submission	Stantec are satisfied the expenditure incurred in generating the Gate 2 submission is relevant to the development of the submission. We have though raised concerns with respect to the fact that 27% of the gate spend is on PM and Leadership costs and have made a recommendation that further measures are taken to increasingly demonstrate efficiency at Gate 3. These points are similar to those that were raised in the Gate 1 assurance. [REDACTED]	
8. Takes full account of greenhouse gas emissions in decision making. Operational and embedded carbon emissions are part of the ‘best value’ scheme assessment.	Greenhouse gas emissions, Operational and embedded Carbon have all been considered as part of the solution assessment.	

Acronyms / Abbreviations

ACWG	All Companies Working Group
AMP	Asset Management Plan
AW	Anglian Water
CRT	Canals and Rivers Trust
DCO	Development Consent Order
DO	Deployable Output
DPC	Direct Procurement for Customers
DWSP	Drinking Water Safety Plan
GUC	Grand Union Canal
HRA	Habitats Regulations Assessment
OFWAT	Office for Water Services
PPT	Project Partners Team
RAG	Red, Amber, Green
RAPID	Regulatory Alliance for Progressing Infrastructure Development
RFP	Request for Proposal
SAC	Special Areas of Conservation
SME	Subject Matter Expert
SRO	Strategic Resource Option
STS	Severn Trent Sources
STT	Severn Trent Transfer
STW	Severn Trent Water
WRE	Water Resources East
WRSE	Water Resources South East
WwTW	Wastewater Treatment Works

1 Introduction

1.1 Background

1.1.1 INTRODUCTION

Stantec was commissioned by Severn Trent, Affinity Water & the Canal & River Trust for the Gate 2 third-line assurance of reports produced as part of the Grand Union Canal (GUC) SRO scheme and Minworth effluent reuse SRO scheme (referred to as the Minworth SRO scheme in this report), from 17th March 2022 to 25th October 2022. This assurance process is part of the RAPID gated process for SRO scheme and will form part of the Board Assurance Statement. Stantec assurance team comprised a core team responsible for the day-to-day management and coordination of the project and Subject Matter Experts (SME) involved in assuring reports aligning with their specialism. From past and current experience in large and complex SRO schemes, Stantec had been able to draw on internal SMEs in this project with the exception of a few external SMEs (Procurement expert, for example).

Following the Gate 2 third-line Assurance process, this report was produced to provide an overview of the following elements:

- Stantec Assurance Approach describing the “philosophy” applied in assuring the documents as well as the methodology and guidance which were followed by each SME;
- A summary of key findings arising from the third-line Assurance of the reports related to the GUC SRO scheme;
- A summary of key findings arising from the third-line Assurance of the reports related to the Minworth effluent reuse source SRO scheme.

This report focuses on the GUC and Minworth SRO schemes. A separate report was prepared by Stantec for the Severn Trent Sources (STs) SRO scheme and complements this report.

1.1.2 CONTEXT

Each SRO scheme goes through a Gated process ranging from Gate 1 to Gate 5, which is supported and overseen by the Regulatory Alliance for Progressing Infrastructure Development (RAPID). The GUC SRO and Minworth SRO schemes are at the Gate 2 stage. Table 2 lists indicative activities as part of the Gate 2 process.

Table 2. Indicative Gate 2 activities² (extract from an OFWAT document)

Indicative Gate 2 activities
Detailed feasibility and data collection (with increased certainty) in a concept design report.
Develop procurement strategy including assessment for potential direct procurement for customers’ delivery.
Pre-planning application activity plan (land referencing, field surveys, environmental permitting plans).

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

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Indicative Gate 2 activities
Full comparison of solutions' costs and benefits as tested in regional or national modelling with consideration of inter-regional options and systems impacts.
Identification of mutually exclusive solutions.
External assurance of data and approaches supported by Board statement
Updated regional stakeholder engagement including customer preference studies.
Assessment of key risks to identify potential regulatory barriers, guidance or changes required for the solution to progress.
Details of efficient spend to gate submission on gate two activities, including a breakdown of costs against activities and evidence of efficiency of spend (benchmarking or tenders) and assurance.
Identify impacts of solution on current supply-demand balance delivery plan with simple comparison to current programme solutions.
Identification of any changes in solution partner (other water company) or solution substitutions.
Develop solution programme plan to determine the activities that need to be undertaken prior to each subsequent gate.

1.2 Stantec Scope of work

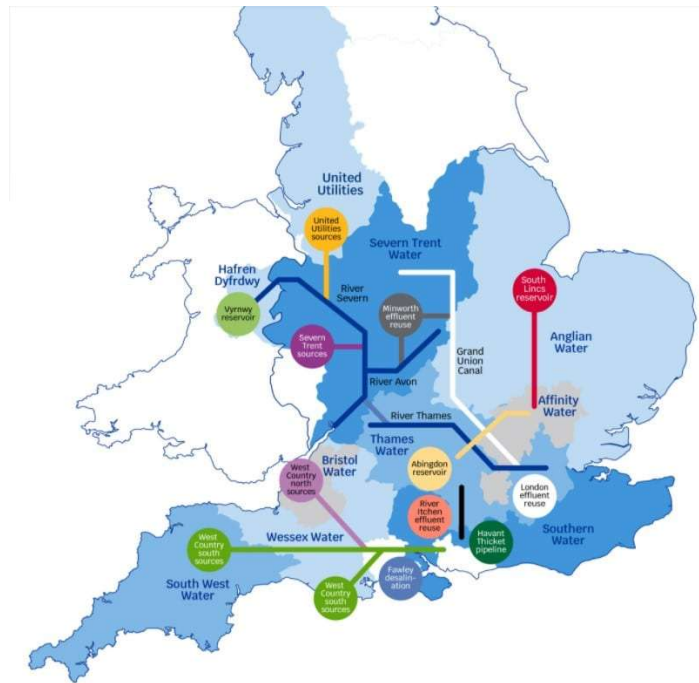
The scope of work of the assurance process involves the following elements:

- A short Discovery Phase to gain a full understanding of the workstreams and to baseline the project. This will include reviewing of consultant scopes of work;
- A Planning stage to agree timelines, prioritisation, and interdependencies. This will be guided by the risk analysis that the Client has completed, and review the recommendations made for the SRO at Gate 1;
- Technical Touchpoints will be established for early sight of annexes, methodologies and strategies and engagement of SMEs with counterparts;
- Independent review of the processes, assumptions, evidence, confidence levels, data & modelling, sample checking, and 1st and second-line assurance of the areas subject to assurance. This will be the core assurance activity;
- Materiality review and R/A/G rating of findings with respect to the Gate requirements and stage of the project;
- Alignment and consistency with RAPID requirements, All Companies Working Group (ACWG) & WRSE methodologies and the extent to which the Board Statement Proof Points can be supported; and
- Documentary evidence including the Assurance Statement and finalised assurance logs/records.

Stantec's scope only includes a selection of documents marked as High and Critical.

1.3 High-level description of the SRO schemes

Figure 1. High-level schematic of SRO schemes



1.3.1 GUC SRO

The GUC SRO scheme is a joint solution between Severn Trent Water (STW) and Affinity Water (AfW). This scheme involves the transfer of water from the midlands to the south-east using the existing canal network. This work is delivered in partnership between the companies and Canal & River Trust. Potential solution capacity of 100 MI/d.

1.3.2 MINWORTH SRO

The Minworth effluent reuse source SRO scheme is a joint solution between STW and AfW. The SRO scheme aims at providing treated effluent for discharge into the River Avon to support the River Severn to River Thames transfer or into the canal network to support the Grand Union Canal transfer. Potential solution capacity of 115 MI/d (215 MI/d including the potential 100MI/d for supplying the GUC scheme).

1.4 Limitations

Stantec has only had access to those documents which were risk assessed by the Project Partners Team (STW and AfW) and classed as high risk (or critical but none were classed as critical). These documents were then subject to third-line Assurance by Stantec. However, there is a body of reports and documents that have been assessed by the Project Partners Team as not requiring third-line Assurance (Medium and Low risk). There has been no requirement for Stantec to review these documents via the third-line assurance process.

2 Assurance Approach

2.1 Principles of Assurance

Our approach to these assurance services is structured around contributing value to the project, through providing independent expertise, timely focused on key aspects, and engaging constructively with the delivery team. Our assurers or subject matter experts (SMEs) bring experience of both delivering similar studies and undertaking internal and third-party assurance of such projects. Key features of our approach include:



Independent,
no surprises

We were truly **independent** of the existing teams and maintained this throughout whilst still being transparent with our feedback to ensure a “**no surprises approach**”. This was achieved through a live shared assurance log, which outlined how the feedback has been arrived at with a clear rationale and appropriate referencing of documents reviewed and RAPID’s requirements.



Client Centric
Collaboration

Collaboration is at the heart of what we do; we were constructive and pragmatic with our feedback. This maximised the efficiency and quality of the assurance work and enabled rapid escalation when required. All of our feedback included suggestions as to the mitigations that the client teams might take.



Risk-Based
approach

We operated a **risk-based (R/A/G), targeted approach** to assurance indicating the significance/materiality of any constructive criticism to the success of the project passing through Gate 2 and expanding levels of effort that are proportionate to the materiality of the expected impact.



Technical &
Regulatory Depth

We have extensive **technical and regulatory depth** and deployed SMEs to deliver a thorough and robust approach to assurance in line with Severn Trent assurance process. We used two lenses, compliance with RAPID’s criteria and the technical robustness of the approach and outputs.



Efficient &
Adding Value

Efficient delivery and value adding to the Client. This included assigning of appropriately experienced SMEs, sharing our analysis of existing RAPID determinations as well as identifying areas of good practice and innovations that the teams can review for adoption in their approach.

Our approach was directly aligned to the guidance stipulated in the RFP document Section 2.0 ‘Assurance Requirements’ as follows:

1. A review of the scope of appointed consultants against Gate 2 requirements and confirmation that adequate steps have been taken to address the actions and recommendations given by RAPID in their assessment of our Gate 1 submission;
2. The methodologies, guidance and policies used to develop the Gate 2 submission are appropriate and have been correctly followed;
3. The submission is complete, as appropriate for Gate 2, and it is accurate;
4. The submission is consistent with related submissions and plans, or deviations are justified; and
5. Evidence is available to support the element of the Gate 2 submission. Where there are uncertainty/assumptions, these are clearly identified and appropriate for this stage of the process with a clear resolution plan.

2.2 Approach to Assurance

2.2.1 GATE 2 ASSURANCE MAP

Table 3 and Table 4 present the list of documents and elements in each document falling under the scope of the third-line assurance review. Table 3 lists the documents originally classed as High for the GUC SRO scheme and which required third-line assurance. Table 4 lists those documents related to the Minworth SRO scheme.

Table 3. GUC SRO - Documents and elements for assurance

Annex No.	Annex	Elements Assured
A1	Engineering CDR	Methodology and Judgment/assumptions
A1.1	Abstraction Site Selection	Methodology and Judgment/assumptions
A1.2	Route Selection Paper	Methodology and Judgment/assumptions
A1.11	Costs & Carbon assessment	Methodology and Judgment/assumptions
A2.4	Final Modelling report	Methodology, Model, Output
B3.3.2	Natural Capital and Biodiversity Net Gain (BNG)	Methodology and Output
B3.3.5	Environmental Appraisal Report (EAR)	Methodology and Output
B3.2.3	Fish survey report	Methodology and Output
B3.2.6	Habitats and protected species desk study	Methodology and Output
B3.3.3	Habitats Regulations Assessment (HRA)	Methodology and Output
B3.2.4	Invasive and non-native species (INNS) survey report	Methodology and Output
B3.2.5	Sediment report	Methodology and Output
B3.3.1	Strategic Environmental Assessment (SEA)	Methodology and Output
B3.2.1	Waterbody connections report	Methodology and Output
B3.3.4	Water Framework Directive (WFD) Assessment	Methodology and Output
B3.2.2	Fish populations	Methodology and Output
B1.4	WQ Monitoring - Gate 2 (Sept 2021 - April 2022) Phase 3 budget	Data Table
B1.5	Updated DWSP	Methodology
B.2.1	Final Report interpretative report with recommendations for future monitoring	Methodology and data table
E1.1	Procurement Strategy Report	Methodology and Judgment/assumptions
E4.1	Efficiency of Gate 2 Spend	Methodology and Output

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Annex No.	Annex	Elements Assured
E5.1	Project Plan Report	Methodology, Judgment/assumptions, and output
	Chapters Gate 2 Submission	

Table 4. Minworth SRO - Documents and elements for assurance

Annex No.	Annex	Elements Assured
A1	Engineering CDR	Methodology, Consistency, Judgement / Assumptions, Data Table
A2	Pipeline Route Appraisal Report	Consistency, Judgement / Assumptions, Data Table
A3.1	Wastewater Treatment Plant - Basis of Design Report	Judgement / Assumptions and Output
A3.2	Wastewater Treatment Plant - Process Options Report	Judgement / Assumptions and Output
A4	Cost and Carbon Report	Output
B1	Ecological Monitoring Tame & Trent - Aquatic Ecology	Methodology and Data table
B2	Flow reduction investigations Tame & Trent	Methodology and Output
B2.1	2d Modelling	Methodology and Output
B3	Environmental Assessment - Minworth & SLR (Summary Report) SEA, HRA, WFD, BNG & Nat Cap, INNS"	Methodology and Output
B3.1	Environmental Assessment - Minworth & SLR Overall report	Methodology and Output
B3.1.1	Environmental Assessment - Minworth & SLR SSSIs	Methodology and Output
B3.1.2(i)	Environmental Assessment - Minworth & SLR B(i) Ecology	Methodology and Output
B3.1.2 (ii)	Environmental Assessment - Minworth & SLR B(ii) Aquatic Ecology	Methodology and Output
B3.1.3	Environmental Assessment - Minworth & SLR River Mease SAC	Methodology and Output
B3.1.4	Environmental Assessment - Minworth & SLR INNS	Methodology and Output
B3.1.5	Environmental Assessment - Minworth & SLR Sedimentation	Methodology and Output
B3.1.6	Environmental Assessment - Minworth & SLR NC&BNG	Methodology and Output
B4	Regulatory Env Assessment Tame and Trent	Methodology and Output
B5	Water Quality Monitoring	Methodology and Output
E1	Further advice DPC procurement options	Methodology and Judgement / assumptions

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Annex No.	Annex	Elements Assured
F1	Update scheme delivery plan	Methodology, Judgement / assumptions, and output
G1	Land & planning constraints report	Methodology and Judgement / assumptions
I1	Efficiency of Gate 2 Spend	Methodology and Output
	Chapters Gate 2 Submission	

2.2.2 RAPID ASSESSMENT CRITERIA

First, and foremost, through the assurance period will be the consideration of whether the proposed Gate 2 submission and associated annexes will be meet RAPID Gate 2 Assessment criteria and guidance illustrated in Table 6. Specific initial considerations part of the assurance process

Table 5. RAPID Assessment Criteria

No	Assessment Criteria	Key Considerations	What does good look like?
1	Robustness	<ul style="list-style-type: none"> Strength of evidence Completeness 	<ul style="list-style-type: none"> Appropriate evidence is presented to support assertions Non-evidenced assertions are presented as uncertainties The evidence and submission is complete for its stage Where evidence is not complete, there is a clear and realistic plan to address gaps
2	Consistency	<ul style="list-style-type: none"> Methodologies, guidance, and policy Other relevant plans and solutions 	<ul style="list-style-type: none"> Consistent with national legislation, policy, guidance and agreed methodologies. (Including Wales specific requirements where solutions are within or affecting Wales) Consistent with other relevant plans and solutions Any changes and deviations are well justified and supported with evidence
3	Uncertainty	<ul style="list-style-type: none"> Risk management / mitigation plan Delivery risks 	<ul style="list-style-type: none"> Appropriate understanding of certainty for stage The range and impacts of the uncertainties are presented Plan in place to quantify and manage/ mitigate uncertainties

SMEs would review their assigned documents against this set of criteria and developed comments highlighting issues or actions that need addressing.

Each comment was then assigned RED-AMBER-GREEN (RAG) Status depending on the severity of the issues raised in the comment against robustness, consistency, and uncertainty. RED status defines a material issue that impacts on the Gate 2 submission, AMBER defined an issue that does not impact on the Gate 2 submission that will be addressed at Gate 3, while GREEN represents no or

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relatively minor issues. The overall RAG status always aligned with the higher risk of any of the assessment criteria.

For example, key annexes being referred to in the report, but which were missing would be assigned a RED against robustness. Similarly, a document which has not passed a second-line of Assurance would be marked as RED against robustness. However, a minor comment referring to a lack of clarity in relation to some of the information or data presented would be assigned an overall GREEN status.

The PPT has then had an opportunity to review third-line Assurance comments and respond back. Stantec team would then assess the PPT responses and set a residual RAG status, ideally lower than the original RAG status. For example, a third-line Assurance comment requesting further updates and clarifications in a report was adequately addressed by submitting a revised version of the report including those updates - in this instance the RAG status could be downgraded to GREEN.

All the comments and RAG status were populated in a master assurance log which was saved internally on SharePoint. Using SharePoint to store the assurance log enabled multiple users to edit the master version of the assurance log simultaneously. This reduced re-work or mistakes by limiting the number of offline versions of the master assurance log.

In addition to following the RAPID Assessment criteria, some additional key areas were being considered as part of the assurance process and it includes:

- Realism of delivery timescales, particularly with respect to planning and procurement routes;
- Robustness of cost and benefit analysis and how this has influenced decision making; typical challenge areas include unit costs, risk and optimism bias, carbon, biodiversity net gain, social benefit, and valuation of non-water resource benefit;
- Risk identification and mitigation with respect to major items that may impact time, cost, and performance;
- Robustness, extent and appropriateness of physical investigations and data collection that has been undertaken;
- Consistency of approach with ACWG methodologies, other SRO transfers and integration with the WRSE optimisation and prioritisation process;
- The extent of stakeholder engagement and the contribution this has made to decision making;
- The robustness and rigour of the design assessments that have taken place; in particular, we would anticipate a focus on the GUC hydraulic capacity and the Minworth treatment standards; and
- Robustness of the evidence for demonstrating cost efficiency in the Gate 2 spend.

2.3 Review of the RAPID Gate 1 decision report

2.3.1 GUC SRO

The RAPID GUC September 21 Gate 1 decision report assessed the Gate 1 assessment as 'Good (meets expectations)'. The report detailed a number of actions and recommendations. None of the actions were marked as priority actions so a remediation action plan was not required. The actions from the review include:

- Ensure a percentage utilisation is determined, including uncertainty and sensitivity. A detailed explanation of the methodology defining the utilisation from the regional modelling should also be provided. Operational utilisation should be reassessed and refined following outputs from the regional modelling

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- Provide clarity on the frameworks used to determine carbon costs and emissions
- Investigate invasive Non-Native Species (INNS) risks further and the efficiency of proposed treatments/mitigation measures

Recommendations from the RAPID Gate 1 report include:

- Include the potential benefits and issues associated with the interactions between the GUC and the Oxford Canal scheme
- Calculate all open water losses
- Ensure constraints on Deployable Output (DO) are considered. Examples include hands off flow considerations and open water quality such as algal growth in warmer weather
- Include the best value options for customers and the environment rather than just least cost. Methodology for this should also be included

2.3.2 MINWORTH SRO

The RAPID GUC September 21 Gate 1 decision report assessed the Gate 1 assessment as 'Good (meets expectations)'. The report detailed a number of actions and recommendations. None of the actions were marked as priority actions so a remediation action plan was not required. The actions from the review include:

- The solution design needs to be fully developed taking into account all scenarios to establish the best option. The gate two submission should also include a catchment/ multi-option report to give confidence that the complex interactions between the options has been fully assessed. It is expected that this is part of the in-combination assessment following the outputs of the regional plans;
- Ensure that the cost and benefits assessment take into account any environmental impact as a result of the diversion of effluent discharge. The solution needs to be included in the WRE regional plan if being utilised for South Lincolnshire reservoir and/ or Anglian to Affinity Transfer SROs;
- Ensure a best value analysis (following relevant guidelines and including environmental/societal/ economic costs) is undertaken and presented for all of the options within the SRO;
- The assessment considering the requirements of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 needs to consider deterioration (including in-class deterioration) and pathway to Good; and
- The Habitats Regulations Assessment (HRA) needs to consider indirect impacts on the River Mease SAC further and those protected species that may utilise it as functionally linked habitat from the Humber Estuary.

Recommendations from the RAPID Gate 1 report include:

- Produce a stakeholder engagement plan, including identification of wider / local stakeholders;
- Further consider social and amenity value. If this is limited due to type of solution, this can be explained in the submission;

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- Consider site features outside of the designated site boundary, particularly in relation to migratory fish species as this functional linkage can extend throughout catchments;
- Carry out studies to investigate source option-specific wider resilience opportunities in gate two once regional modelling outputs are complete;
- The risk assessment must consider the impact of influent on the treatment process at Minworth Wastewater Treatment Works (WwTW). It should also include a failsafe shut down to ensure that any partial or full treatment failure at Minworth WwTW does not lead to non-compliant wastewater being discharged for abstraction/transfer to STT/GUC; and
- Review learning from previous drinking water quality events where changes in water quality has impacted on customer acceptability.

2.4 Specific considerations and Focus Areas related to our methodology

Our initial considerations with respect to the documents that will be assured are provided in Table 6. Specific initial considerations part of the assurance process

Table 6. Specific initial considerations part of the assurance process

Engineering Annexes	<p>Hydraulic analysis of the GUC with the potential for mobilizing sediment with increased velocities will be an area of specific focus. The extent to which hydrometric data has been collected and utilized will be a further consideration together with the model representation, hydrology, CRT licence changes and the potential need for improvement works to the canal.</p> <p>Other areas of specific consideration will include the robustness of the proposed “treatment train” at Minworth, the impact of climate change – in particular, the reliability of the resource under extreme drought - delivering net zero carbon and pipeline route optimization.</p> <p>Cost and Carbon data assessment will include benchmarking of capital items unit costs, of opex cost components and utilisation assumptions, risk, and uncertainty allowances in line with the All Companies Working Group (AWCG) Cost Consistency Methodology, reviewing the appropriateness of quantified cost risk assessments and the alignment with allowances for optimism bias.</p>
Environmental	<p>The potential for new and different pollutants arising at the point of water treatment – particularly, as a result of utilizing an industrial era canal - is a concern and this must be reflected in the DWSP.</p>
Non-Technical	<p>Appropriateness of durations assumed for being construction ready by AMP8, including procurement and consenting. In particular, the adequacy of the assumptions used in the consenting plan.</p> <p>The proposed funding, ownership, and operating strategy in particular the assumptions that have been made in the DPC assessment and the opportunities to maximise efficiency for customers.</p> <p>Evidence of how efficiency has been demonstrated in delivery of the gated allowance, including internal spend, external spend, partner costs, allocation of overheads, disallowed cost, and sufficiency of spend.</p> <p>The depth and breadth of the stakeholder engagement (for which we note assurance is only required on the GUC) and the extent to which it has informed decision making, risk assessment and benefit valuation.</p>
Gate 2 Report	<p>Consideration of how all the different criteria have been used, balanced, and traded off to reach the overall conclusion to enable the best decisions to be made for customers and the environment</p> <p>Consistency with RAPID criteria and reliability with respect to the contents of the annexes that have been assured.</p>

3 GUC SRO: Summary of Key Findings

The 2022 Strategic regional water resource solutions guidance for Gate 2 document produced in April 2022 provides guidance regarding the content of the Board assurance statement and provided a list of proof points to address. Stantec has considered the Board statement proof points and provided a summary in Table 7.

Table 7. GUC SRO Summary Assurance Findings

1. Meets the requirements set out in Ofwat’s Final Determination, and subsequent additional feedback from Ofwat.		
Key Evidence	Independent assurance opinion	Risk Rating
Project Partners have provided the technical Annexes, supporting the Gate 2 submission, which have been scoped for third-line assurance. Furthermore, the final Gate 2 submission chapters have been provided for review.	For the Gate 2 submission, we have reviewed elements of the submission to RAPID and supporting technical Annexes in line with our third-line assurance scope. Full details are provided in the assurance feedback logs. Based on the information reviewed to date, we are satisfied that the Gate 2 submission documents for the GUC SRO meet the RAPID Gate 2 assessment criteria.	
2. Have been subject to sufficient processes and internal systems of control to ensure that the information on design, costs and benefits contained in this submission are reliable.		
Key	Independent	Risk Rating
Project Partners have provided the original scopes for the technical Annexes supporting the Gate 2 submission. For each of the Annexes identified for our review, first and second-line assurance feedback logs, with associated responses, have been provided.	First and Second line assurance was undertaken on all Annexes submitted to Stantec for review. Supporting feedback logs and updated documents, with tracked changes, were provided as evidence of first and second-line assurance actions being complete. Therefore, the evidence provided to date demonstrates that, through the first and second-line assurance undertaken on GUC, the Gate 2 submission has been subject to sufficient processes and internal systems of control. However, second-line Assurance was not completed prior to third-line for Annexes A1.11, A2.4, B3.2.5 and second-line Assurance actions had not been completed prior to third-line Assurance on several A annexes and Gate 2 Submission documents. These have subsequently been completed and addressed but did not follow the planned process and system of control. However, this does not materially affect Gate 2 submission.	

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3. Have been appropriately assured to give our stakeholders, including customers, trust, and confidence in this Gate submission.		
Key	Independent	Risk
<p>As set out in this document, Stantec have undertaken third-line assurance on the documents associated with the GUC SRO submission. The GUC assurance logs evidenced the first and second-line assurance activities, including dates of assurance and lead assurer.</p>	<p>Stantec have undertaken independent third-line assurance which is risk-based, robust and thorough. Independent technical specialists relevant to the disciplines of each aspect of the submitted annexes have led detailed reviews.</p> <p>Project Partners have undertaken 1st & second-line Assurance, as detailed in the Board point 2 above.</p> <p>Stantec has only had access to those documents which were risk assessed by the Project Partners and classed as high and critical risks. Those documents were then subject to third-line assurance by Stantec. However, there is a sample body of reports and documents that have been assessed by the Project Partners as not requiring third-line assurance (medium & low risk). There has been no requirement for Stantec to review these documents via the third-line assurance process. This limits the extend extent and depth of the third-line assurance completed by Stantec.</p>	
4. Have appropriately considered the feedback and opinion of independent external assurance partners.		
Key	Independent	Risk
<p>Stantec have provided a series of third-line assurance feedback comments which the Project Partners have and are responding to.</p>	<p>All assurance comments have been addressed via responses provided by the Partner Project Team and accepted by our independent reviewers. Comments have been resolved by amendments to documentation and evidence provided to support these amendments.</p>	
5. Progress on the solution, to date, is commensurate with the timeline of being 'construction ready' in AMP8;		
Key	Independent	Risk
<p>The following evidence has been reviewed in relation to this aspect:</p> <ul style="list-style-type: none"> • Annex E1.1 - Procurement Strategy Report • Annex E5.1 – Project Plan Report 	<p>We are satisfied that progress to date still allows the solution to be 'construction ready' during AMP8. The program to being construction ready for AMP8 is achievable but will be challenging.</p> <p>There is sufficient evidence to show consideration to planning, procurement and design durations. However, further detail must be developed early in Gate 3 to define clear activities and timescales. As the project is still at an early stage, with many uncertainties, indicative timescales have been provided for key milestones in the programme, these must also be further defined in Gate 3.</p>	
6. Scope, detail and quality of the activities are such that would be expected of a large infrastructure scheme of this nature at this stage		
Key	Independent	Risk

<p>As set out in this document, Stantec have undertaken third-line assurance on the documents associated with the GUC SRO submission. The GUC assurance logs evidenced the first and second-line assurance activities, including dates of assurance and lead assurer.</p>	<p>From our third-line assurance activities, Stantec are satisfied that the scope, detail, and quality of the activities are satisfactory for Gate 2.</p> <p>All high priority issues flagged have been responded to by the Partner Project Team through amendment of documentation, providing greater clarity behind decision making where required, or providing assurance to us that Gate 3 will capture and address the points and feedback we have raised.</p>	
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7. Expenditure incurred in generating the Gate submission is efficient and relevant to the development of the submission

Key	Independent	Risk
<p>The following evidence has been reviewed in relation to this Annex: E4.1 Efficiency of Gate 2 Spend</p>	<p>Stantec are satisfied that the expenditure incurred in generating the Gate 2 submission is relevant to the development of the submission.</p> <p>We do though make the following points:</p> <p>Leadership costs, reported in the project management and tri-partite leadership budget lines are to the value of £831,951, which comprise 26% of the gate spend. £497k of this has been reported as tri-partite leadership comprising of £305k of ST costs and £192k of Affinity cost. The Affinity cost is primarily through consultancy contracts. The ST cost is through internal cost allocation and therefore outside of competitive procurement. It is built up from banded salaries allocated to the project. We have accepted banded salary rate data at face value and have not verified this. Severn Trent staff cost is allocated to the gate as a percentage of the wider SRO team (working over a number of SROs). We accept this is the same approach used in Gate 1 and was accepted by RAPID. However, this approach limits the ability to assess the cost efficiency of this spend as no time booking data is available. We note that the overall spend of 26% on leadership and PM is, in our opinion, a high percentage of the gate spend, this was also raised during Gate 1 assurance. The companies note that in their opinion this is a factor associated with the GUC Gate 2 funding being low when compared to other SROs of a similar scale (for example STT). We would recommend that further measures are put in place for Gate 3 to assess and demonstrate the efficiency of leadership and PM costs including internal staff allocations.</p>	

8. Takes full account of greenhouse gas emissions in decision making. Operational and embedded carbon emissions are part of the 'best value' scheme assessment.

Key	Independent	Risk
<p>The following evidence has been reviewed in relation to this aspect:</p> <ul style="list-style-type: none"> A1.11 Cost and Carbon 	<p>Greenhouse gas emission, Operational and embedded Carbon have all been considered as part of the solution assessment.</p>	

4 Minworth SRO: Summary of Key Findings

Table 8 provides a summary of key findings following third-line assurance against the Board assurance statement proof points for the documentation related to Minworth SRO.

Table 8. Minworth Summary Assurance Findings

1. Meets the requirements set out in Ofwat’s Final Determination, and subsequent additional feedback from Ofwat.		
Key Evidence	Independent assurance opinion	Risk Rating
As set out in this document, Stantec have undertaken third-line assurance on the documents associated with the Minworth SRO submission. The Minworth assurance logs evidenced the first and second-line assurance activities, including dates of assurance and lead assurer.	For the Gate 2 submission, we have reviewed elements of the submission to RAPID and supporting technical Annexes in line with our third-line assurance scope. Full details are provided in the assurance feedback logs. Based on the information reviewed to date, we are satisfied that the Gate 2 submission documents for the Minworth SRO meet the RAPID Gate 2 assessment criteria.	
2. Have been subject to sufficient processes and internal systems of control to ensure that the information on design, costs and benefits contained in this submission are reliable.		
Key	Independent assurance opinion	Risk Rating
Project Partners have provided the original scopes for the technical Annexes supporting the Gate 2 submission. For each of the Annexes identified for our review, first and second-line assurance feedback logs, with associated responses, have been provided.	First and Second line assurance was undertaken on all Annexes submitted to Stantec for review. Supporting feedback logs and updated documents, with tracked changes, were provided as evidence of 1 st and second-line assurance actions being complete. Therefore, the evidence provided to date demonstrates that, through the first and second-line assurance undertaken on Minworth, the Gate 2 submission has been subject to sufficient processes and internal systems of control. However, second-line Assurance was not completed prior to third-line for Annexes B2.1. This has subsequently been completed but did not follow the planned process and system of control. However, this does not materially affect Gate 2 submission.	
3. Have been appropriately assured to give our stakeholders, including customers, trust, and confidence in this Gate submission.		
Key	Independent assurance opinion	Risk

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<p>As set out in this document, Stantec have undertaken third-line assurance on the documents associated with the GUC SRO submission. The GUC assurance logs evidenced the first and second-line assurance activities, including dates of assurance and lead assurer.</p>	<p>Stantec have undertaken independent third-line assurance which is risk-based, robust and thorough. Independent technical specialists relevant to the disciplines of each aspect of the submitted annexes have led detailed reviews.</p> <p>Project Partners have undertaken first & second-line Assurance, as detailed in the Board point 2 above.</p> <p>Stantec has only had access to those documents which were risk assessed by the Project Partners and classed as high and critical risks. Those documents were then subject to third-line assurance by Stantec. However, there is a sample body of reports and documents that have been assessed by the Project Partners as not requiring third-line assurance (medium & low risk). There has been no requirement for Stantec to review these documents via the third-line assurance process. This limits the extend extent and depth of the third-line assurance completed by Stantec.</p>	
<p>4. Have appropriately considered the feedback and opinion of independent external assurance partners.</p>		
Key	Independent assurance opinion	Risk
<p>Stantec have provided a series of third-line assurance feedback comments which the Project Partners have and are responding to.</p>	<p>All assurance comments have been addressed via responses provided by the Partner Project Team and have either been accepted by our independent reviewers or are currently being reviewed. Comments have been resolved by amendments to documentation and evidence provided to support these amendments.</p>	
<p>5. Progress on the solution, to date, is commensurate with the timeline of being 'construction ready' in AMP8;</p>		
Key	Independent assurance opinion	Risk
<p>The following evidence has been reviewed in relation to this aspect:</p> <ul style="list-style-type: none"> • Annex E1.1 - Procurement Strategy Report • Annex E5.1 – Project Plan Report 	<p>We are satisfied that progress to date still allows the solution to be 'construction ready' during AMP8. The program to being construction ready for AMP8 is achievable but will be challenging.</p> <p>As per Project Partner responses to assurance comment, scoping and procurement will need to commence ahead of the DCO decision on an 'at risk' basis and this will need to be flagged to RAPID. The appointment of DCO expert advisors will be required early on in Gate 3 to define linkage between environmental, engineering, procurement, and stakeholder workstreams and the planning & consenting process.</p> <p>As the project is still at an early stage, with many uncertainties, indicative timescales have been provided for key milestones in the programme, these must also be further defined in Gate 3.</p>	
<p>6. Scope, detail and quality of the activities are such that would be expected of a large infrastructure scheme of this nature at this stage</p>		
Key	Independent assurance opinion	Risk

<p>As set out in this document, Stantec have undertaken third-line assurance on the documents associated with the Minworth SRO submission. The Minworth assurance logs evidenced the first and second-line assurance activities, including dates of assurance and lead assurer.</p>	<p>From our third-line assurance activities, Stantec are currently satisfied that the scope, detail, and quality of the activities are satisfactory for Gate 2. All High issues flagged have been responded to by the Partner Project Team through amendment of documentation, providing greater clarity behind decision making where required, or providing assurance to us that Gate 3 will capture and address the points and feedback we have raised. Further refinement of Process design is required, as per our assurance feedback.</p>	
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7. Expenditure incurred in generating the Gate submission is efficient and relevant to the development of the submission

Key	Independent assurance opinion	Risk
<p>The following evidence has been reviewed in relation to this Annex:</p> <ul style="list-style-type: none"> • I1 Efficiency of Gate 2 Spend 	<p>Stantec are satisfied that the expenditure incurred in generating the Gate 2 submission is relevant to the development of the submission.</p> <p>We do though make the following points:</p> <p>Leadership costs, reported in the project management and tri-partite leadership budget lines are to the value of £405,709, which comprise 27% of the gate spend. £336k of this has been reported as tri-partite leadership comprising of £202k of ST costs and £134k of Affinity cost. The Affinity cost is primarily through consultancy contracts. The ST cost is through internal cost allocation and therefore outside of competitive procurement. It is built up from banded salaries allocated to the project. We have accepted banded salary rate data at face value and have not verified this. Severn Trent staff cost is allocated to the gate as a percentage of the wider SRO team (working over a number of SROs). We accept this is the same approach used in Gate 1 and was accepted by RAPID. However, this approach limits the ability to assess the cost efficiency of this spend as no time booking data is available. We note that the overall spend of 27% on leadership and PM is, in our opinion, a high percentage of the gate spend, this was also raised during Gate 1 assurance. The companies note that in their opinion this is a factor associated with the Minworth Gate 2 funding being low when compared to other SROs of a similar scale (for example STT). We would recommend that further measures are put in place for Gate 3 to assess and demonstrate the efficiency of leadership and PM costs including internal staff allocations.</p>	

8. Takes full account of greenhouse gas emissions in decision making. Operational and embedded carbon emissions are part of the 'best value' scheme assessment.

Key	Independent assurance opinion	Risk
<p>The following evidence has been reviewed in relation to this aspect:</p> <ul style="list-style-type: none"> • A1.11 Cost and Carbon 	<p>Greenhouse gas emission, Operational and embedded Carbon have all been considered as part of the solution assessment.</p>	