

Gate 1 queries process

Strategic solution(s)	Minworth
Query number	MIN002 version 2
Date sent to company	22/07/2021
Response due by	26/07/2021

Query

- 1) Please clarify how your projected solution cost estimates have changed between the total solution costs presented at PR19 (of approx £130m for a 115 Ml/d solution) and the current Gate 1 submission, where possible providing a breakdown and comparison of the cost estimates. Please explain clearly any changes, added/eliminated cost items or activities, or developments that contributed to the difference.
- 2) Please clarify what is included in "third party costs" referenced in Table 14 1?
- 3) Please provide the gate-2 budget estimate referenced in Paragraph 14.6 under the heading of "Forecast Spend to Gate-2".

Solution owner response

In all cases the documents submitted to RAPID contain information that is commercially confidential. Please ensure that appropriate steps and safeguards are observed in order to maintain the security and confidentiality of this information. Any requests made to RAPID or any organisation party by third parties through the Freedom of Information Act 2000, the Environmental Information Regulations 2004, or any other applicable legislation requires prior consultation and consent by each of Severn Trent Water Limited, and Affinity Water Limited in relation to Minworth SRO before information is released as per the requirements under the respective legislations. The content of the requested documents is draft and relates to material or data which is still in the course of completion in travel to Gate 2, and should not be relied upon at this early stage of development and is liable to further change as more

information comes to light as a result of further investigations. We continue to develop our thinking and our approach to the issues raised in the document in preparation for Gate 2.

Query 1

Please clarify how your projected solution cost estimates have changed between the total solution costs presented at PR19 (of approx. £130m for a 115 MI/d solution) and the current Gate 1 submission, where possible providing a breakdown and comparison of the cost estimates. Please explain clearly any changes, added/eliminated cost items or activities, or developments that contributed to the difference.

Query Response

Minworth SRO is a raw water source for two transfer SROs, STT and GUC. For completeness we have provided a response for both options. The tables below detail the changes between our original PR19 submission and our Gate 1 submission.

- Table 1 details the solution cost estimate changes for Minworth STT 115 MI/d solution. This shows an increase from [REDACTED]
- Table 2 details the solution cost estimate changes for Minworth GUC 100 MI/d solution. This shows a decrease from [REDACTED]

The reasons for the changes are listed in tables 1 and 2, and are primarily driven either by technical considerations resulting in changes to treatment processes and pipeline routes, or changes to risk allowances driven by the application of the ACWG Cost Consistency Methodology.

In both cases, the solution cost estimates were used to derive the indicative fixed and variable water trading charges submitted for inclusion in the WRSE Regional Investment Model for WRMP24.

Table 1 Minworth STT 115 Ml/d solution costs estimate changes between original PR19 submission and Gate 1 submission

Cost Component	Original PR19 £m	Gate 1 £m	Reasons for Changes
Treatment			The original high level concept design for the additional treatment process included ammonia removal and phosphorus removal. Further consideration of the likely discharge standard for the River Avon has led us to revise the treatment processes likely to be required. Whilst we have been able to remove the ammonia removal process, as detailed in paragraph 4.6 of the Minworth SRO Gate 1 submission, newly available water quality data for the River Avon and Minworth final treated waste water indicates there is a risk that an additional treatment processes will be required to remove trace organics. This is a significant sum which we have decided to include in the submitted costs rather than rely on costed risk or Optimism Bias. The need for the additional treatment process will be reviewed in detail for gate-2.
Pipeline			The original high level concept design for the pipeline route included a discharge to the River Avon upstream of Warwick. Our environmental investigations indicate that it may be preferable to discharge downstream of Warwick which has the added benefit of ensuring no additional flood. This has extended the length of the pipeline which would also require additional crossings of major infrastructure, including the planned alignment for HS2. The preferred discharge location will be confirmed for gate-2 and the pipeline route optimised accordingly.
Costed Risk			The original high level cost estimate was based on a historical Optimism Bias percentage and did not include a project specific costed risk register. As detailed in paragraph 10.1 of our gate-1 submission, we have now aligned our risk allowances with the guidance given in the ACWG Cost Consistency Methodology Rev. C. As we continue with our environmental and engineering investigations in gate-2, we will re-assess our risk allowances as we seek to improve the certainty of outturn costs.
Optimism Bias			
Total			

Table 2 Minworth GUC 100 MI/d solution costs estimate changes between original PR19 submission and Gate 1 submission

Cost Component	Original PR19 £m	Gate 1 £m	Reasons for Changes
Treatment			The original high level concept design for the additional treatment process included ammonia removal and phosphorus removal. Further consideration of the likely discharge standard for the canals associated with GUC SRO has led us to revise the treatment processes likely to be required. Based on the outputs of our ongoing water quality monitoring programme, we have determined that only the phosphorus removal treatment process is required. This will be subject to further detailed consideration in gate-2.
Pipeline			Pipeline transfers are included in GUC SRO.
Costed Risk			The original high level cost estimate was based on a historical Optimism Bias percentage and did not include a project specific costed risk register. As detailed in paragraph 10.1 of our gate-1 submission, we have now aligned our risk allowances with the guidance given in the ACWG Cost Consistency Methodology Rev. C. As we continue with our environmental and engineering investigations in gate-2, we will re-assess our risk allowances as we seek to improve the certainty of outturn costs.
Optimism Bias			
Total			

Query 2

Please clarify what is included in "third party costs" referenced in Table 14.1?

Query Response

Table 14.1 in the Minworth Gate 1 submission features a line for 3rd party costs. This is made up of forecast costs for NAU (Natural England, Environment Agency & Natural Resources Wales). SROs are required to cover NAU costs, as agreed in the RAPID quarterly liaison meeting of 3rd December 2019. We have a Discretionary Advice Service Contract in place with Natural England for advice related to this SRO, with a ceiling forecast cost. The breakdown of these is as given in Table 3 below:

Table 3 – 3rd Party Costs

Workstream	Item	Total Forecast Spend	Total Forecast Spend 17/18 prices
Third Party Costs	Environment Agency		
Third Party Costs	Natural England		
Total			

As stated in section 14.1 of our Gate 1 paper the above forecast is based on 'actual costs incurred to 31st March 2021, combined with forecast expenditure to 5th July 2021'. To date we have been invoiced for approximately [REDACTED]. We anticipate that forecast costs will be reconciled with actual costs in September 2021 and reported at the QLM.

Query 3

- 1) Please provide the gate-2 budget estimate referenced in Paragraph 14.6 under the heading of "Forecast Spend to Gate-2".

Query Response

Please find below Table 4 our current Gate 2 cost forecast for Minworth.

Table 4 – Gate 2 cost forecast for Minworth.

	Workstream	Forecast Budget £k	% of gate allowance
Delivery team costs	Programme Management		
Environment	Water quality monitoring Tame & Trent		
	Environmental assessments		
Engineering	Engineering		
Stakeholder	Stakeholder		
Planning & Consents	Planning and Consents		
Procurement/DPC	Procurement and DPC advice		
Assurance	Assurance		
3rd Party costs	NAU		
	Natural England		
	Subtotal		
Contingency	Contingency		
	Total		
	Budget		

Due to the lead times required for environmental data collection we have already let 2 packages of Environmental work for Gate 2 [REDACTED] as agreed in RAPID 1:1's due to required duration or data collection during particular seasons. These cover water quality monitoring on the Rivers Tame and Trent and ecological monitoring on the Rivers Tame and Trent, the latter has been procured jointly with South Lincolnshire Reservoir SRO to ensure efficient spend.

Date of response to RAPID	26 th July 2021
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