

Gate 1 queries process

Strategic solution(s)	SESRO
Query number	SER003
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 total solution costs submitted in WRMP19 or at PR19 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.

Solution owner response

To clarify, the costs presented in Table 11 of the Gate 1 submission relate solely to the reservoir plus associated works, and are presented in an NPV format.

WRMP19 solution costs have been provided in various formats, but all use the same underlying cost information. For the purposes of this response we have analysed the option level information available on scheme capex costs as presented in the PR19 Business Plan table “App21 - Direct procurement for customers” and compared this to the SRO capex data as provided to the WRSE regional modelling and as used to derive the AIC and NPV values provided in the Gate 1 submission.

The App21 data is only available for the 150 Mm³ SESRO option, hence the comparison is limited to that option.

The total capex provided in PR19, App21 is as follows:

Item	Value (£M), 2017/18 cost base
Development and Procurement	<i>Data redacted, commercially confidential</i>
Construction Capex (including risk and optimism bias)	<i>Data redacted, commercially confidential</i>
Total	<i>Data redacted, commercially confidential</i>

The equivalent data extracted for the 150Mm³ option for the SESRO SRO is as follows:

Item	Value (£M), 2020 cost base
Development and Planning	<i>Data redacted, commercially confidential</i>
Construction Capex	<i>Data redacted, commercially confidential</i>
Costed Risk	<i>Data redacted, commercially confidential</i>
Optimism Bias	<i>Data redacted, commercially confidential</i>
Construction Capex (including risk and optimism bias)	<i>Data redacted, commercially confidential</i>
Total	<i>Data redacted, commercially confidential</i>

Hence, overall, the difference between the scheme estimated cost at PR19 and the SRO at Gate 1 is **[redacted text, commercially confidential]**. This is equal to less than 5% of the scheme costs, and much of it is associated with the change in cost base.

We have analysed the different elements that have changed since PR19 and provide these below, for information. Some add costs to the scheme, some reduce costs and some adjust costs between the different cost categories, all together contributing to the net change seen.

Capex

For the 150Mm³ SESRO variant the base capex (cost base 2017) has stayed the same for the large majority of the cost items as the design has not been significantly updated since WRMP19. Relatively minor exceptions to this are:

- Cost for solar farm compensation has been reviewed and updated; results in an increase equivalent to **[Data redacted, commercially confidential]**% of the base capex of the scheme.
- Rate and quantity of drainage material and riprap adjusted; results in an increase equivalent to **[Data redacted, commercially confidential]**% of the base capex of the scheme.
- Slight reduction in the area of land required based on current measurement of the Red Line Boundary and accounting for TW owned land; results in a decrease equivalent to **[Data redacted, commercially confidential]**% of the base capex of the scheme.

- Overhead applied to more of the cost items in Gate 1 compared to WRMP19; results in an increase equivalent to **[Data redacted, commercially confidential]**% of the base capex of the scheme.

The above resulted in an overall increase in the base capex of the scheme (for the cost base 2017) of approximately **[Data redacted, commercially confidential]**%

The base capex (cost base 2017) of the scheme for Gate 1 was subsequently inflated from 2017 to a cost base of 2020 for inclusion in the WRSE Template. This was achieved within Thames Water's Asset Planning System (APS). Therefore, some of the difference in the capex reported for WRMP19 compared to at Gate 1 will be due to inflation differences.

Costed Risk

For the SESRO 150Mm³ variant the costed risk register was revisited for Gate 1 following the approach that was set out by the All Company Working Group (ACWG). Revisiting the risk register resulted in identifying some additional risks, however, there were also some WRMP19 risks where the magnitude could be reduced as a result of improved understanding through the Gate 1 work.

The costed risks within the risk register have therefore changed between WRMP19 and Gate 1:

- Gate 1 P50 costed risk = **[Data redacted, commercially confidential]**% of the Gate 1 base capex (cost base 2017)
- WRMP19 P50 costed risk = **[Data redacted, commercially confidential]**% of the WRMP19 base capex (cost base 2017)

The costed risk (cost base 2017) of the scheme for Gate 1 was subsequently inflated from 2017 to a cost base of 2020 for inclusion in the WRSE Template. Therefore, some of the difference in the costed risk reported for WRMP19 compared to Gate 1 will be due to inflation differences.

Optimism Bias

For the SESRO 150Mm³ variant the optimism bias was revisited for Gate 1 following the approach that was set out by the ACWG, including use of the ACWG Optimism Bias Template. While both the ACWG approach and the Thames Water approach are based on the procedure outlined in HM Treasury Green Book they do differ in how the optimism bias contributory factors are considered. Due to a change in approach, and a need to revisit Optimism Bias against the current understanding of the design and costed risk, the selected optimism bias changed between WRMP19 and Gate 1:

- WRMP19 optimism bias = **[Data redacted, commercially confidential]**%

- Gate 1 P50 costed risk = ***[Data redacted, commercially confidential]***%

Date of response to RAPID	26/07/21
Strategic solution contact / responsible person	<i>[text redacted, personal information]</i> SRO Programme Manager <i>[text redacted, personal information]</i> <i>[text redacted, personal information]</i>