
Gate 1 queries process

Strategic solution(s)	Thames to Southern Transfer
Query number	TST007
Date sent to company	04/08/2021
Response due by	06/08/2021

Query

Have any "cascade" options through the companies' existing networks been considered for this solution?

Solution owner response

"Cascade" options through the companies' existing networks have been considered for this solution as part of Gate 1. However, it should be noted that the exact capacity and timing of any need for T2ST is dependent on the outputs from the regional modelling so this could only be considered in a limited way to Gate 1.

Currently there is no existing network connectivity between the Thames Water and Southern Water supply areas that could be utilised by the T2ST as a cascade option. The large capacity of the proposed transfer (50-200Mld) and lack of existing connectivity between the two companies in the Hampshire region, led to the conclusion that a cascade through the existing network would not be possible.

In addition to consideration of the existing network, a workshop with Southern Water representatives was also undertaken to identify any opportunities to utilise planned mains/transfers.

The identified assets, and planned projects, are included in Table 3 (Inter-related schemes) of the Gate 1 report.

Two planned pipelines were identified as having the potential opportunity to be utilised as part of T2ST as part of a “cascade”:

- Southampton Main Link – a new 45MI/d potable water main from Testwood to Otterbourne which is currently going through the planning and design process with construction to be completed by 2027.
- Otterbourne to Andover main link – a new 25MI/d potable main also currently going through the planning and design process with construction to be completed by 2027.

The Southampton Main link had the potential to be utilised for Options 5 and 6 as a connection from Testwood to Otterbourne only. However, the planned 45MI/d main is far below the potential capacity of the T2ST (currently expected to be in the range of 50-200MI/d) and would therefore need to include a major upgrade to the main currently planned. The timing was also highlighted as an issue, as the design and planning for the Southampton Main link needs to be finalised by 2022/3 well before a commitment on T2ST could be made and would not be utilised until at least 2036 by T2ST. For these reasons it was decided that a cascade option utilising the planned Southampton Main Link was not possible. However, the proposed transfer route from Testwood to Otterbourne for Options 5 and 6 would be expected to follow a very similar alignment to that of the Southampton Main Link to mitigate the impacts of a new transfer as much as possible.

The Otterbourne to Andover main link had the potential to be utilised for Options 1-4 instead of a spur to Andover from the main T2ST pipeline. However, the planned 25MI/d main would need a major upgrade in order to take an additional 10MI/d which the T2ST spur to Andover is currently expected to provide. The timing was also highlighted as an issue, as the design and planning for the Otterbourne to Andover main link needs to be finalised by 2022/3 well before a commitment on T2ST could be made and would not be utilised until at least 2036 by T2ST. For these reasons it was decided that a cascade option utilising the planned Otterbourne to Andover main link was not possible.

During Gate 2, communication will be kept open with the teams working on the design and planning of both the Southampton Main and the Otterbourne to Andover main link to confirm if there is any opportunity to utilise these planned assets as part of T2ST, or plan for adaptation in the future.

Date of response to RAPID	06/08/2021
Strategic solution contact / responsible person	