

## Accelerated gate two queries process

<b>Strategic solution(s)</b>	Havant Thicket, Fawley Desalination, and Water Recycling
<b>Query number</b>	SRN003
<b>Date sent to company</b>	21/12/2021
<b>Response due by</b>	23/12/2021 for points 1, 2, 3, 7, 10, 12, 13 and 14 07/01/2022 for points 6, 8, 9, 11, 15 and 17 14/01/2022 for points 4, 5 and 16

### Query

- 1) Please provide the full assurance report completed by [REDACTED] and any updates to the report when available.

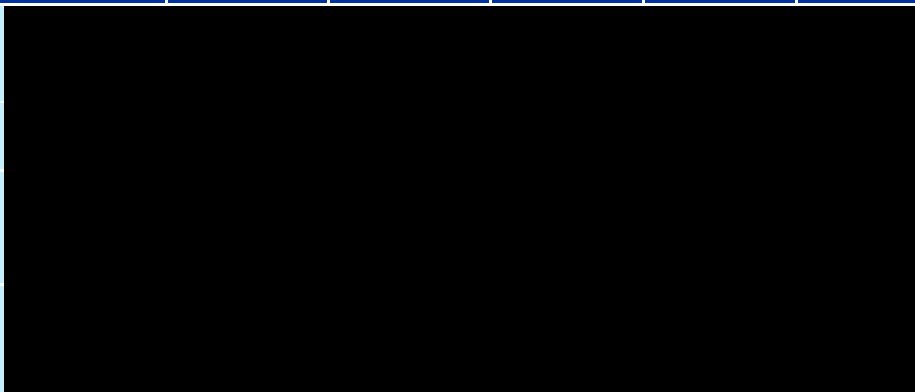
The [REDACTED] report was provided as part of HAV006 (HAV006 [REDACTED] – New Gate 2 Final Assurance Statement.pdf). Please note we are asking permission to publish this and will be in touch if we are unable to. Annex 6, Efficiency of Expenditure, was undergoing final amendments on the morning of the 6<sup>th</sup> December and [REDACTED] were unable to view offline the final version which is reflected in the scoring. We have since asked them to complete a post submission addendum to this report, which we will provide to you as part of the full report.

- 2) Please clarify the discrepancy in the forecast gate three costs reported in Table 14 on page 46 of Annex 6: Efficiency of Expenditure (Annex 6) and Table 23 on page 35 of the Water Recycling Concept Design Report ii, and the forecast gate 3 costs reported in Table 23 on page 34 of the Havant Thicket Concept Design Report ii

There were a series of data changes resulting from reviews of the data taking into account feedback that had been received during the assurance process. Due to the late nature of the changes, these were not fully reflected across the submission.

The finalised figures are presented below.

Description	Early Gate 3 expenditure	Gate 3 expenditure	Total Gate 3 expenditure	Gate 3 funding allowance	Delta to allowance	Forecast costs to
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		post Gate 2 submission				November 2022
Water recycling / Havant Thicket						
Water recycling back up						
Desalination						
Total						

The above is consistent with:

- Table 14 on page 46 of Annex 6; and
- Table 23 on page 35 of the Water Recycling Concept Design Report ii.

Table 23 on page 34 of the Havant Thicket Concept Design Report ii' contains draft figures, and should be disregarded.

Tables 11-13 contain the correct figures for each line item. However, the totals at the bottom have not been updated. We provide the updated table with the correct totals above.

- 3) Please clarify the discrepancies between the early gate expenditures reported in Table 14 on page 46 of Annex 6 and the early gate three expenditures reported in Tables 11-14 on pages 39-45 of the same document?

There were a series of data changes resulting from reviews of the data taking into account feedback that had been received during the assurance process. Due to the late nature of the changes, these were not fully reflected across the submission.

The value of Early G3 expenditure is the same total cost in all tables – i.e. [REDACTED] at a deflated cost as Table 14. Tables 9 and 10 are not deflated costs. Tables 12 – 13 are correct, however Table 11 total should read [REDACTED] – all other costs in Table 11 are correct. All should match with this correction.

- 4) Please complete Excel templates that have previously been provided to you by RAPID separately for gate two activities and gate three activities for each SRO, breaking down any cost items above £500,000 as you have done in response to queries SWR002, SDE002, and HAV004. Please provide the line-by-line description of specific outputs considered in allocating the costs between gate two and gate three within these templates. Please provide this to us by **7 January 2022**. Please provide all other responses by the query deadline.

The deadline to answer to this question was agreed for 14th January 2021. Please see attached excel file (SRN003 queries 4 and 5 – G2 and G3 tables.xls) which provides a response to the above. There is a separate excel sheet for Gate 2 costs and for Gate 3 costs for each SRO (Desalination, Water Recycling and Havant Thicket).

- 5) In these updated and separate gate two and three templates for each SRO, please indicate specifically the timing of when gate three costs were incurred for each activity or output.

The deadline to answer to this question was agreed for 14th January 2022.

A review of cost allocation has been completed and provided in the attached excel sheet SRN003 queries 4 and 5 – G2 and G3 tables.xls. In this, tasks and therefore costs have been allocated to the individual SRO and the appropriate gate within each SRO. More than 500 individual activity lines captured in our cost control system were assessed. The basis for allocation to either Gate 2 or 3 is summarised below:

- As a principle each activity maps to the indicative Gate activities as described in Annex 2 of PR19 final determinations: Strategic regional water resource solutions.
- Activities for design and engineering have a clear separation between Gate 2 and 3, created by the need to produce assured output material for the Gate documentation. This separation point was May 2021 i.e. any work after this point was in support of gate 3 to meet our outline delivery schedule under all best endeavours (ABE)
- For all other activities continuing beyond June 2021, the month where focus moved from Gate 2 to Gate 3 has been recorded in SRN003 queries 4 and 5 – G2 and G3 tables.xls and cost captured accordingly.

All values have been represented to four significant figures.

- 6) Please elaborate on the "mini competition for DPC consultancy support" in the common costs reported in the Commercial Analysis section of Table 7 of Annex 6. Is the [REDACTED] the cost for putting on the competition or for the DPC consultancy support itself? If the former, please elaborate on the costs of running a mini competition for consultancy support.

We estimated cost for completing the Mini Competition process to be in the region of [REDACTED] of the [REDACTED].

The [REDACTED] detailed in the table reflects the cost of running the Mini Competition for DPC consultancy support as well as further Procurement & Commercial activity completed throughout the remainder of 2020 & 2021. This included the co-ordination of the consultancies' activities required to develop the DPC section of the Gate 2 paper & Draft Control point reports, inputting to these reports reviewing them and ultimately preparing them for submission. All of this has been summarised under a single heading.

- 7) What is the total cost for the ceramic membrane pilot trial? Page 18 of Annex 6 states that the expenditure has been allocated 50:50 between water recycling and Havant Thicket. This is recorded as █████ (█████ in 2017/18 prices) for both solutions in Tables 5 and 6, and the same █████ is allocated to early gate three expenditure for both solutions under the Data Collection, Sampling, and Pilot Trials categories of Tables 12 and 13 of Annex 6. The same amount of █████ in 2017/18 prices has been allocated to desalination under the Feasibility Assessment and Concept Design category of Table 11. Have costs for the ceramic membrane pilot been allocated to the desalination SRO?

The Ceramic membrane pilot trial costs have been evenly allocated between Water Recycling and Havant Thicket. We can confirm no Ceramic membrane pilot trial costs have been allocated to Desalination. The value of █████ for Desalination, whilst similar in scale, is made up of a number of different line items including 3D plume dispersion modelling from the outfall, and engineering design of the Desalination option.

- 8) Please clarify how the hydraulic modelling in support of option capacity selection was required specifically for the development of these SROs through the RAPID gated process.

The sizing of the SRO becomes more complex as the design process matures and the schemes pass through the RAPID gates. The initial estimation of requirement outlined at the strategic level in our WRMP sets the requirements of an SRO to meet a 1-in-200 year need (the █████ desalination option). More granular modelling is required to understand how each option will operate and the interrelationships and impacts of the scheme on existing infrastructure. In particular, more detailed modelling than was carried out for WRMP 19 (or would be for WRMP24) in order to demonstrate firstly whether each option is capable of meeting not just the maximum flow expected in a drought, but also the duration of a 1-in-200 year drought. A wide range of drought conditions was generated using stochastic forecasting techniques. Only a small number of the SRO options tested between gate 1 and gate 2 were originally modelled in the WRMP process. These were the original “base case” – █████ desalination – and the indirect re-use option to the lower Itchen (discontinued at gate 1). All other options were not contained as specified now in the original WRMP.

In addition, modelling was carried out to test the capacity of the Hampshire trunk and distribution network as it will be when the assets are in commission to transport the water from where it is to where it is needed. The new preferred option chosen at gate 2 delivers water to the █████ water supply works, whereas the original base case delivered water to █████ water supply works.

The need to understand peak rates, drought duration and network capabilities is particularly important with infrequently utilised drought assets and more so when a storage reservoir such as Havant Reservoir is included. Without this modelling, it is not possible to define the final system, including Peak Deployable Outputs and Dry Year Annual Averages, with any confidence.

A number of different modelling exercises have been specifically undertaken as part of the SRO design development for the Gate 2 submission. They comprise three distinct but interlinked elements:

1. Water resource modelling
2. Hydraulic network modelling
3. Optimisation modelling

Water resources modelling, using SW's [REDACTED] model, has been used to refine the SRO by modelling:

- The size of the WRP required to work in conjunction with the storage capacity of Havant Thicket reservoir to enable the reservoir to meet the deficit, for both “Havant Thicket Classic” (21 Ml/d via Portsmouth Water's [REDACTED]) and the SRO. This would be a new and unique element of Southern Waters system and not represented in any other modelling completed either internally or externally to date.
- The specific forecast operational usage of the system elements to;
  - size the downstream treatment assets, by understanding the relationship with other water supply works and therefore the required capacity at [REDACTED] WSW.
  - inform the DPC assessment so that any potential CAP can understand the potential asset utilisation and therefore financial risk exposure.

The Hydraulic network modelling and Optimisation modelling refines the strategic daily timestep of the water resources model to define solutions to the deficit within the potable network to an operational 15min timestep.

WRSE used the [REDACTED] Model (Pywr) to define the water deficits of the environmental ambition scenarios agreed with the [REDACTED] and SW. The deficits for each scenario are then included in the programme appraisal being undertaken within the WRSE investment model to compare regional options and make selections.

However, this investment model does not consider either the dynamic inter-relationship between demand / supply or the dynamic system of [REDACTED] [REDACTED] (the original source of water for the reservoir), [REDACTED] (the new source for the reservoir) and the storage available at Havant Thicket reservoir. This specific interrelationship required to allow advancement of the SRO can only be considered in a Water Resources model. This modelling is only required for this purpose and has only been undertaken in SW's [REDACTED] for these SROs, as the Pywr model was not available for this project. This is outlined in Annex 4 of the Gate 2 submission.

An example of new work being carried out since WRMP19 is the evolution of the Havant Thicket direct pipe option (D2). This was not modelled in WRMP 19, as it was neither the preferred option nor a strategic alternative in the final plan. Modelling carried out for Gate 1 had shown that it was capable of meeting the original requirement as set out in WRMP19. Modelling work for gate 2 showed that it was NOT capable of meeting the requirements of a higher capacity (due to requirements to replace the [REDACTED] transfer, and likely considerations of 1-in-500 year requirements) as in some scenarios the reservoir would have run out of water before the drought was over. This work was conclusive in eliminating D2 as a suitable option, now that the preferred option is meeting a higher peak requirement than

specified in WRMP19. Similar modelling was carried out for each of the options included in the detailed options appraisal process carried out as part the work for Gate 2.

The Water Resources planning team responsible for WRMP19 and WRMP24 has supported and reviewed the additional modelling through the SRO development and supplied the base assumptions that drive the [REDACTED] model. They have also supported in checking the alignment between the [REDACTED] Model and the WRSE Pywr model used by WRSE, to ensure it is appropriate for the task. The modelling results have also been regularly shared with, and feedback sort from, Portsmouth Water and WRSE.

- 9) Please provide further detail on the PMO transformation costs of £372k and their relevance to the SROs in this submission.

The PMO transformation work was commissioned to support the SRO schemes in recognition of the inherent complexity of the programme and the requirement to plan for multiple potential futures. As the options were developed for both desalination and water recycling, each with a number of future scenarios and sub options, it was necessary to have the appropriate support in place to plan the future structure and delivery models as a parallel activity. Until the options appraisal process was completed it was necessary to assume that each option was capable of being the preferred option, and planned for on the assumption that the “all best endeavours” obligation would apply to it if selected, hence, the need to consider multiple options in parallel.

The scale of the SRO schemes with forecast CAPEX spend in excess of £500m, each with the potential for both Direct Procurement for Customer (DPC), and a Development Consent Order (DCO) make this a unique project and different to Southern Waters “normal” delivery model. This coupled with the urgency demanded by the well-defined requirements and environmental challenge in the Hampshire region, meant that PMO effort needed to be completed by a discrete team alongside our BAU activities. This enabled us to complete both the necessary gate activities and set ourselves up for future success regardless of the delivery route or option selected. Carrying out this work early in the gate 2 process enabled not only the ability to deliver in parallel whichever option was selected, but also has enabled a seamless transition from option selection to delivery, which began immediately the preferred option had been selected and ratified.

To ensure this work was completed efficiently it was carried out by an external consultancy appointed through our SSP (Strategic Solution Provider) framework. This approach enables SW to draw rapidly from industry Subject Matter Expert partners which would otherwise be acquired through direct employment with long lead times and a one-off requirement or on bought-in consultancy model, either of which was considered appropriate in this case (our approach to choosing the right route to market is as outlined in Annex 6).

In the calculation of Gate 2 costs, an allowance was made for non-SRO costs, as referenced in page 29 of Annex 6.

- 10) Does "programme" in the Programme Management section of Table 7 in Annex 6 refer to the three SROs specifically, or are these are costs for the



broader WfLH programme? Please clarify the differences between usage of terms "programme" and "project" throughout Annex 6.

Project and Programme management resources are entirely distinct. Project management specifically refers to the management of individual projects. Programme management refers to the resources that are delivering the overarching WfLH programme. The values included for Programme management in Annex 6 only refer to the proportion of their time spent delivering the SRO project. To confirm, Programme management time spent delivering non-SRO projects have not been included in Annex 6.

- 11) Please clarify how the £[REDACTED] for authoring support in Table 7 of Annex 6 in the PMO section is different from the £[REDACTED] of authoring support and £[REDACTED] of submission development costs in the Programme Management section of the same table, and from the £[REDACTED] for drafting the Gate 2 submission in the Commercial Analysis section. Was the total cost of drafting the Gate 2 submission £[REDACTED]?

The costs for completing the drafting of the gate 2 submission documentation have been accounted for according to which resource completed the works and are therefore identified separately in more than one activity area rather than grouping under one generic cost category.

The total of £[REDACTED] authoring costs consists of the following:

£[REDACTED] for authoring support in Table 7 of Annex 6 within the PMO section includes external resource for the development of the three Concept Design Reports. £[REDACTED], £[REDACTED], and £[REDACTED] of authoring support includes external resource to develop the document structure, and author the level 1 and level 2 documents in addition to Annex 6.

To support authorship activities, submission information was produced by technical teams and legal and assurance provided qualitative support. These costs are not included within the £[REDACTED]. The legal, assurance and programme management costs are shown in the Annex tables. Engineering costs are also included in the Annex under Engineering Design for each of the options.

- 12) The Total column of Table 10 in Annex 6 does not equal the sum of the Gate 2 and Early Gate 3 columns. Please provide a corrected table or explain the reason for this discrepancy.

There were a series of data changes resulting from reviews of the data taking into account feedback that had been received during the assurance process. Due to the late nature of the changes, these were not fully reflected across the submission. Please see corrected table as below:

Description	Gate 2 (£k)	Early Gate 3 (£k)	Total (£k)
Desalination			
Water recycling			
Havant Thicket alternatives			

- 13) Please clarify why the data in Tables 11-13 of Annex 6 have been presented via an even proportioning of common costs instead of an allocation of common costs in line with direct SRO costs.

This was a SWS decision to reflect that the work carried out under common activities was equally split through the SRO projects with regard to level of effort. For example, assurance activities would be the same level of effort for each individual SRO irrespective of the value of the project. SWS consider the equal split method as appropriate for attributing common costs. We have also provided an alternative method for attributing the split of common costs through aggregating the cost relative to the proportional spend against a particular SRO (this is provided in Table 10 of Annex 6).

- 14) Please clarify how the specialist planning resource advising on the consenting process and DCO regime (£█████ in the Planning and Consenting section) listed in Table 7 of Annex 6 differs from the legal and strategic advice on planning and consenting strategy including the DCO and TCPA regimes (part of the £█████ in the Legal Advice section) listed in the same table?

The specialist planning resource in the Planning and Consenting section relates to professional, expert planners advising on spatial planning matters and the scheme development and consenting process for infrastructure projects under both the Town and Country Planning Act and Development Consent Order regimes. This includes in house senior planning resource and planning consultancy services, which includes embedded support with planning and consultation matters and expert comparative analysis of site selection and consenting risks, mitigation and deliverability. This support includes assisting with writing consenting management documents, briefs, and consenting strategy specifically for the SROs, as required as part of the Gate 2 submission, and it has been brought in at this early stage to help identify necessary deliverables and future consenting risks, and to inform delivery programmes working with the wider delivery team.

This is separate to the legal advice on planning and consenting obligations, requirements and legal strategy and process. The legal and related strategic advice on planning and consenting was instructed to advise the programme on the overall legal framework within which the policy and infrastructure delivery is governed, and on the complex legal framework and requirements of the consenting and delivery process. This is to ensure that the work undertaken now is able to provide a sound foundation and ensure a legally robust position that will stand up to scrutiny during the later public engagement, submission and Examination during the consenting process. This will help ensure that the selected option is able to be consented and delivered on time.

- 15) Please clarify the amount that is specifically related to legal costs for the "interface between the SRO and water resource management planning (statutory WRMPs and regional planning) included in Table 7 of Annex 6.

WRMP (Legal) costs do not form part of the Rapid submission and as such are separate from the sums to be recovered and are excluded.

- 16) Please fill in the attached spreadsheet with the requested breakdown of the legal costs reported in Table 7 of Annex 6 aligned with the activities



described on pages 31-34 of Annex 6. Please ensure the values in this table are consistent with reported totals in Annex 6. Please provide this response by 7 January 2022.

The deadline to answer to this question was agreed for 14th January 2021.

We acknowledge the request for a breakdown of the legal costs in question 16 of query SRN003, and for the breakdown of those costs to be set out in the particular formats in the new spreadsheet that accompanied the request. The time spent by Southern Water's legal team was not recorded in those formats and in order to supply the information in the formats requested, it was necessary to review several thousand time entries which were recorded over a 14-month period covering Gate 2 and early start Gate 3 activities.

We have now reviewed a report which covers all time recorded and on a monthly basis invoiced, with related narratives, on Gated activities. We used this report to allocate each time entry to one or more of RAPID's specified activities as identified on the new RAPID spreadsheet. Where a time entry covered two or more of those specified activities, it was reviewed to determine the appropriate allocation, depending on the description of the activity.

This allowed allocation of each time entry to the appropriate category within the new spreadsheet and then for the time cost figure for each entry to be reconciled with the fees incurred.

The new spreadsheet has resulted in a few amendments to the original allocations made in tables 11,12 and 13 within Annex 6 in order to allocate costs as requested by RAPID but the totals remain the same.

Time reporting was not specifically set up to separate Gate 2 or early start Gate 3 activities but was recorded against project activities. Therefore we have made a reasonable estimation that any legal costs post 27<sup>th</sup> September 2021 are considered early Gate 3 activities. This is represented as approximately 14% of the overall legal costs incurred during the period leading to 6<sup>th</sup> December 2021.

Please note:

- The attached spreadsheet contains cumulative totals per task within each sub-category.
- The attached spreadsheet contains an estimated Gate 2 and early gate 3 spend per sub-category based on an assumed split of time as described above.
- As per question 15 of SRN003, the legal costs previously allocated to the WRMP interface workstream (circa [REDACTED]) have been removed from the total legal fees in this spreadsheet.

All values have been represented to four significant figures

- 17) Please provide copies of any contract notices required and issued under regulation 69 of the Utilities Contracts Regulations 2016 and contract award notices issued under regulation 70 of the Utilities Contract Regulations 2016 in respect of contracts placed for carrying out of gated activities including in respect of legal services.

At this stage of the programme we have relied predominately on existing framework agreements to source the services required for the work undertaken on the gated activities to date.

In the main these have been sourced through the Strategic Solutions Partner, Studies and Investigations and Business Management Consultancy Frameworks. The relevant contract award notices are listed below.

1. Southern Water's contract award notice for the SSP Framework is below. Key to note that the framework had within it an extension clause which we subsequently opted to use.

Services - 335862-2014 - TED Tenders Electronic Daily (europa.eu)

Award notice ref: 2014/S 190-335862

2. Business Management Consultancy Framework

Services - 563583-2021 - TED Tenders Electronic Daily (europa.eu)

Award notice ref: 2021/S 213-563583

3. Studies and Investigations Framework

Services - 465333-2020 - TED Tenders Electronic Daily (europa.eu)

Award notice ref: 2020/S 192-465333

In addition we have issued a Prior Indicative Notice to engage the market relating to the Reverse Osmosis supply, however with the Desalination option being paused this did not proceed into a Contract Notice.

1. PIN for Reverse Osmosis Membranes discussions

Supplies - 534152-2020 - TED Tenders Electronic Daily (europa.eu)

With regard to the engagement of external legal services to support Gate 2 activities were undertaken pursuant to Regulation 50(10)(f) of the UCR 2016 (as amended), which permits the use of the negotiated procedure without prior call for competition.

The basic project was the engagement of external legal services to support Gate 1 activities, which was procured in accordance with Reg. 44 and Regs. 16(1)(c) & 90 as a below threshold 'light touch' contract for services. Accordingly, no Contract

Notices under Reg. 69 and/or Contract Award Notices under Reg. 70 were published as publication was not required under either regulation.

A contract award notice under Reg. 91(3) is now being prepared for publication. Attached, for information and in lieu of a contract notice, is a copy of the Request for Proposals used to obtain proposals from 5 potential legal services providers in February 2020.

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## Solution owner response

All answers for questions have been provided above in **BLUE**.

<b>Date of response to RAPID</b>	14/01/2022
<b>Strategic solution contact / responsible person</b>	