

RAPID Gate 2 Submission: Response to draft decision

12 April 2022



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1. Executive Summary

Since the draft decisions were published on 1st March 2022 Portsmouth Water and Southern Water have met with RAPID and the EA (with Southern Water also meeting with the DWI and Ofwat) to discuss relevant parts of the draft decision documents during the response period. This has been extremely helpful in allowing us to confirm our understanding and to discuss certain topics to be able to provide a no surprises approach to the response to the draft decision for each strategic resource solution type.

Regarding the methodology employed by RAPID for calculating Gate allowances, the current approach will result in significant underfunding. We acknowledge that RAPID has concerns about the efficiency of some of Southern Water's spending, and we hope in this response to provide some assurance in this regard. Using the currently available guidance (from the outline set out in the 2019 PR19 final determination) we have carried out a detailed bottom-up forecast of all the activities required up to Gate 4 for delivery of the solution at the earliest possible date. This outline does not reflect the delivery timeframe we need. There is a mis-match between the available guidance and our detailed activity forecast, and this is why the proposed gate 3 allowance is insufficient.

In addition, Portsmouth Water require funding to manage the interface between the Havant Thicket Reservoir Project, Water Recycling Plant and direct pipework SRO to effectively deliver to agreed timescales for both projects. The funding of the SRO includes forecast costs for the interface activities of the two projects. Significant underfunding of both parties introduces risks to the delivery timetable, and therefore we believe that there is a good case for moving away from fixed percentage allowance.

As such, we believe there is a good case for moving away from fixed percentage allowance and we have presented this case below, for RAPID's consideration. We would welcome a discussion to explore a change to the RAPID allowance model to ensure the affordability of Gate 3 and Gate 4 activities and hence deliverability of our SRO.

Our activity based, bottom up review shows that many of the disallowed costs in the draft decision do not align with what is required to deliver the programme and we provide further evidence (i.e. in addition to that included with our Gate 2 submission) following discussions with RAPID, EA, DWI and Ofwat to support this position. This includes the early start Gate 3 activity for Desalination completed prior to 27th September 2021.

We have recalculated our common costs across the three SROs following discussion with RAPID during the response period. We propose a new allocation of Gate 2 costs to reflect this feedback and ask that RAPID take the evidence on disallowed costs and our proposed revised allocation into account in their final decision for Gate 2.

There are inherent difficulties with meeting some of the activities required to meet the gate requirements as a result of the accelerated timescales we are working to. Conversations with the Environment Agency confirm that the WRMP regulatory process should be the driver for the development of technical information around water resources, not the gated process, however we have been asked to provide Gate 2 submissions which include solutions which are of a standard suitable for inclusion in a final WRMP, over six months before our expected WRMP submission.

This concern has been reflected in our response and in relation to priority action completion dates.

Portsmouth Water is also impacted by Southern Water submitting its WRMP earlier than the rest of the industry, and before a regional Best Value plan is available as it needs to bring forward preparations to align the future needs for both companies to support our collaborative approach. Other companies with standard (non-accelerated) gate timescales are unaffected by this and we ask RAPID to consider a pragmatic approach for the accelerated gate requirements going forwards.

As we have discussed with RAPID recently, beyond the template in the PR19 documentation from 2019, there is currently no Gate 3 guidance available as a confirmed scope for Gate 3 activities. This is delaying conclusion of formal partnership and commercial arrangements between Southern Water and Portsmouth Water and increases the risk to delivery timescales. We would welcome the opportunity to work collaboratively with RAPID in defining the Gate 3 scope, to ensure we can improve efficiency and avoid duplication by reporting on the considerable amount of technical work, assessment and appraisals that are being undertaken as part of other statutory and regulatory processes (WRMP and Regional Plan, DPC and consenting) so that RAPID can consider whether the delivery milestones are being met and release funding for the continued development of the Selected Option.

We are targeting 28th February 2023 as a realistic date for Gate 3 submission based on what we currently understand the Gate 3 requirements to be (based on the PR19 guidance) and would welcome the opportunity to help scope any draft Gate 3 guidance as it becomes available. We would also welcome the opportunity to work with RAPID on cost allocations following this submission. This includes legal costs where we would like to bring RAPID up-to-date with the steps we have taken to update our recording of legal costs to reflect RAPID feedback and to ensure we are able to make efficiencies wherever possible.

We will work with RAPID to confirm if any change to timing or finance is required to meet the requirements of Gate 3 is required when the final Gate 3 guidance is published.

2. Introduction to response

Since the draft decisions were published on 1st March 2022 Portsmouth Water and Southern Water have met with RAPID and the EA (with Southern Water also meeting with the DWI and Ofwat) to discuss relevant parts of the draft decision documents during the response period. This has allowed us to confirm our understanding and to discuss key topics in order to provide a no surprises approach to the response to the draft decision for each strategic resource solution type.

Our response mirrors the RAPID draft decision document structure and headings with the intention to facilitate reading. Where we have no comments or significant updates within a section, that heading will not appear. In addition, where a topic has appeared in more than one section, we have cross-referenced the first section information appears to prevent repeat information for ease of reading.

3. Havant Thicket SRO

3.1. Solution Progress and funding

3.1.1. Current RAPID allowance methodology

The original allowance for the investigation and development of the SROs through the gated process (i.e. to Gate 4) was calculated in the PR19 final determination using a sample of four projects identified in business plans. The development cost was on average 6.4% of the total forecast capital cost, with Ofwat confirming that the Thames Tideway project also required about 6% of costs for development, excluding land acquisition. Table 1 below reproduces Ofwat's benchmarking data and adds the weighted average and a comparable figure for Southern Water.

In addition to our costing completed for Gate 2, we have a detailed bottom-up costing of the activities we consider necessary to deliver the preferred scheme, including a forecast of all activities needed up to and including Gate 4 with the best available information. The forecast cost from start to Gate 4, including all gates is £50.95m (in 17/18 prices¹). The forecast capital cost to deliver the Selected Option is ██████ (in 17/18 prices), meaning that development costs to Gate 4 will be ████% of the total cost of including development of ██████. This is not an outlier in the range of projects cited at PR19 by Ofwat, and our development costs are comparable as a percentage to the Abingdon reservoir (now SESRO) development percentage, as shown in Table 1.

We are willing to share the activity and cost forecasts in detail with RAPID.

¹ We anticipate that costs will be incurred after Gate 4 but they will be in 2024/25 i.e. in the next asset management period. We anticipate that funding for these costs would be applied for as part of the PR24 process.

Table 1 Ofwat Benchmarking data with weighted and comparable figure for Southern Water²

Scheme	Development £m	Total cost £m	Development %
Abingdon reservoir	237	1,966	12.1%
South Lincs reservoir	35	648	5.4%
East Mids raw water storage	6	166	3.7%
Deephams re-use	16	352	4.4%
Average			6.4%
Weighted average			9.4%
Southern Water / Portsmouth Water preferred option actual to Gate 2 / forecast to Gate 4*	■	■	■

* Bank of England CPIH inflation forecasts have been applied to forecast costs beyond Gate 2.

Table 2 SRO spend by Gate below shows the profile of this spend by gate and compares it with the profile of the gate allowance, which is allocated in fixed percentages derived from the PR19 final determination. We are forecasting a peak in expenditure between Gate 2 and Gate 3, whereas the Final Determination allocation expects the largest proportion of spend to be between Gate 3 and Gate 4.

The peak in spending is largely driven by the need to run the Development Consent Order (DCO) and Direct Procurement for Customers (DPC) processes in parallel. In particular, we expect to have completed DPC Control Point C by Gate 3, and to have completed the Environmental Impact Assessment, Non-Statutory Consultation and Statutory Consultation for the DCO in advance of a February 2023 Gate 3 so the DCO application itself can be submitted in November 2023.

Table 2 profile of SRO spend by Gate

£m 17/18 prices	G1	G2	G3	G4	Total
Ofwat efficient spend / forecast	2.3	4.8	31.5*	12.3*	50.9
Allowance ³	3.6	7.2	9.5	10.8	31.1
Difference	1.3	2.4	-22.0	-1.5	-19.8

² PR19 Draft Determination, Strategic regional water resource solutions appendix, July 2019, table 2.1 [PR19-draft-determinations-Strategic-regional-water-resource-solutions.pdf \(ofwat.gov.uk\)](#)

³ The allowance shows the amounts for recycling at Gate 1 and recycling and the direct pipe option at Gate 2, followed by the allowances for recycling proposed in the draft decisions.

RAPID has recalculated the allowances for Gate 3 and Gate 4 using the fixed percentage of total cost, and the fixed allocation at each gate as set out in the PR19 determination. As a result, the method for calculating the allowance will result in underfunding in certain periods and a surplus of funding in others.

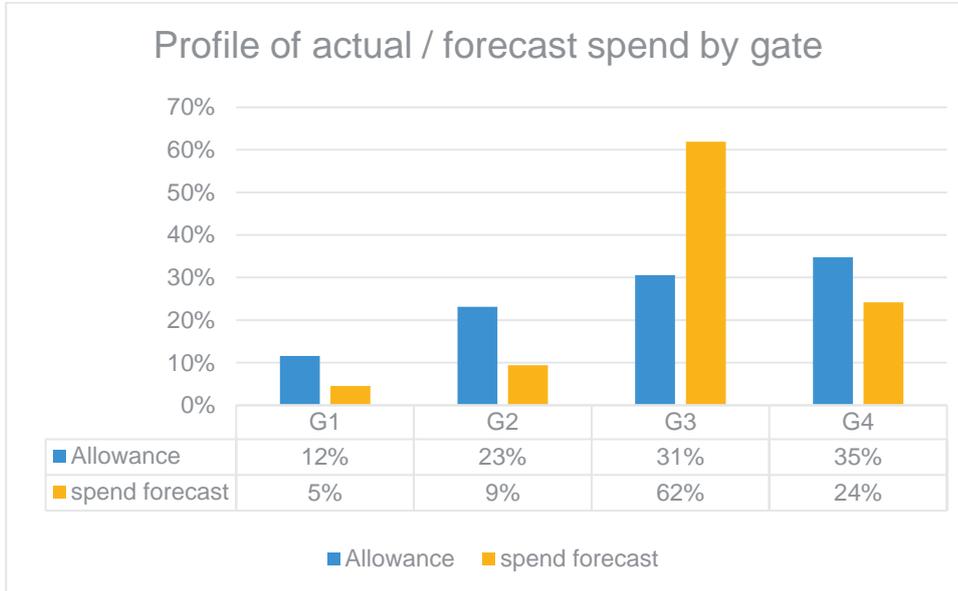


Figure 1 profile of SRO spend by Gate.

RAPID percentage allowances have been adjusted to reflect the increased Gate 2 allowance.

3.1.2. There is a good case for moving away from fixed percentage allowance.

We consider that there is a good case for moving away from fixed percentages based on the small sample of projects presented above. The maturity of our delivery plans, and clarity on the option to be delivered has increased materially since both PR19 final determinations and Gate 1.

We acknowledge that RAPID has concerns about the efficiency of some of our spending, and we hope in this response to provide some assurance in this regard. We have carried out a detailed bottom-up forecast of all the activities required up to Gate 4 for delivery of the solution at the earliest possible date. At present the only available guidance for what is required at Gate 3 is from the outline set out in the PR19 final determination in 2019. This outline does not reflect the delivery timeframe we need. There is a mis-match between the available guidance and our detailed activity forecast, and this is why the proposed gate 3 allowance is insufficient.

The forecast cost c.£44m from Gate 2 to Gate 4 has been the subject of internal challenge to identify the strictly necessary activities and has also been reviewed externally. This activity was carried out to confirm that the cost forecasts were reasonable. The RAPID efficient spend to Gate 2, and our forecast to Gate 4 result in a total cost c.60% greater than the proposed total allowance.

In a scenario where we were to apply for this funding via a price review we would expect that if Ofwat had concerns about efficiency it would, after having conducted appropriate investigations on the proposed costs, apply a company-specific efficiency challenge to the forecast costs. The challenge applied to the costs for the original SROs in the PR19 plan was 8.33%. Using a fixed percentage in fixed proportions implies an efficiency challenge of closer to 40%.

In addition, Portsmouth Water require funding to manage the interface between the Havant Thicket Reservoir Project, Water Recycling Plant and direct pipework SRO to effectively deliver to agreed timescales for both projects. The funding of the SRO includes forecast costs for the interface activities of the two projects. Significant underfunding of both parties introduces risks to the delivery timetable, and therefore we believe that there is a good case for moving away from fixed percentage allowance.

3.1.3. Options for future funding

There are precedents for RAPID adapting the way allowances are calculated. In the context of adjusting Gate 1 and Gate 2 allowances so underspend at Gate 1 could be carried forward, on 8 December 2021 Ofwat wrote to Southern Water⁴ to confirm that the Gate 2 allowances were increased to £7.42m for desalination and £6.09 for recycling. There are similar examples with other SROs.

In the case of the South East Strategic Reservoir Option SRO, the standard Gate 1 final decision confirmed the ability to carry forward underspend at Gate 1. The reasoning for this included that the percentage allocations to each gate were '*inherently imprecise*':

"Some solution owners raised concerns in their representations regarding whether gate two allowances would be sufficient for completion of gate two activities and suggested that gate one underspend should be carried forward to gate two. The percentage allocations to each gate in our Final Determination at PR19 were inherently imprecise and were based on our understanding of likely profile of activities to be carried out in progressing the development and investigation of solutions taking into account companies' proposals in this respect. We now have an improved understanding of the activities to be carried out at gate two and consider that it will be beneficial to allow funding allowance that has not been used at gate one to be made available to solution owners for carrying out gate two activities.

*We have therefore decided to merge gate one and gate two allowances for this solution. This will allow any underspend on gate one activities to be used for gate two activities. We will continue to scrutinise expenditure to ensure that it is appropriate and efficient. Companies remain responsible for management of cost risk to meet gate requirements."*⁵

We have considered the options available for funding the work required for Gate 3 and beyond. None of the available options (apply for full funding at PR24, apply for transition funding for the last year of the current AMP or bringing forward underspend from Gates 1 and 2) can plausibly remove the funding gap between the allowed and forecasted for the work we need to carry out.

Looking at the recycling solution in isolation means it requires additional funding. Overall, the funding originally provided for the solutions to be developed in parallel was c£78m, some of which is due to be returned to customers at PR24 (e.g. the unspent desalination funding). This process would overall return money to customers, while still leaving the SRO solution itself underfunded.

We request that the funding allowance is increased for Gate 3 in line with the forecasted costs, which includes the Portsmouth Water activities needed to enable the interface of the SRO with the Havant Thicket reservoir.

⁴ Letter from David Black to Ian McAulay, 8 December 2021. [Standard-gate-1-final-decision-Letter-Southern-Water.pdf \(ofwat.gov.uk\)](#)

⁵ Gate 1 Final Decision for the South East Strategic Reservoir Option, published 8 December 2021, [Standard-gate-one-final-decision-for-South-East-Strategic-Reservoir-Option_Final.pdf \(ofwat.gov.uk\)](#)

3.2. Evidence of efficient expenditure

3.2.1. Programme and project management

3.2.1.1. Cost Benchmarking Data

As there has not been the consenting and delivery of water resources infrastructure of this scale in the UK for the past 30 years, and due to the novel nature of the RAPID Gated Process with Southern Water being the first company to progress through it, benchmarking data relating to costs that are equivalent to the Gate 1 to Gate 2 period of project development is scarce and inherently unreliable as a benchmarking tool.

In the draft decision RAPID has used Thames Water's London Effluent Reuse SRO Gate 1 submission as an efficient benchmark. Whilst there are similarities between the nature and complexities of our SROs and the London Effluent Reuse scheme, the projects are at fundamentally different stages of the project lifecycle, as such we do not consider that they are comparable.

The London Reuse scheme was managed by one company and the option was present in Thames' WRMP19 plan before becoming an SRO project. This is unlike the options we were assessing at Gate 2, which were developed out of our WRMP19 preferred strategy and were tested against the WRMP19 'base case'. After Gate 1 we were developing 8 options in parallel, with each one being a potential substitute for the base case. For the Havant Thicket options we needed to develop a new interface between an existing non-SRO WRMP19 project (Havant Thicket Reservoir, being managed by Portsmouth Water), and two separate SRO projects being managed by Southern Water (the direct pipe option and the direct pipe plus water recycling option.)

The complexity of aligning the programme and project requirements of both a live major project and proposed SRO for two companies is on a different scale of complexity with significant focus on building foundations for a long-term relationship to successfully deliver the two projects in combination with water resource benefit to customers from both companies.

In addition to developing multiple options so a final decision could be made, the Section 20 Agreement with the EA required us to continue to pursue the base case in support of our "all best endeavours obligation", which at the time was desalination. As an example of the more complex activities we need to carry out, between Gate 1 and Gate 2 we carried out a non-statutory consultation, based around desalination but including other options.

Another example of the difference between the London Reuse Gate 1 programme costs is evidenced by the fact that in parallel to preparing the Gate 2 submission, we undertook a complex Options Appraisal Process to identify a new Selected Option that was designed to be robust enough to withstand future scrutiny under the DCO process. This required significant programme resource. This level of detailed assessment and appraisal work was not yet required for the London Reuse SRO Gate 1 submission as it is a Gate 2 activity.

The options being assessed involved potential impacts on nationally and internationally designated sites and National Parks well as complex urban areas, and it required significant programme management to ensure the options were properly assessed against one another and appropriate decision-making processes were undertaken by the programme at appropriate times.

In addition, our Gate 2 submission had an assurance framework that built on the framework developed for Gate 1 and involved additional elements, in part due to the more technical nature

of the information required for a Gate 2 submission. It included technical assurance and an additional risk-based assurance exercise undertaken by external consultants in order to minimise any emerging risks identified during the period between Gate 1 and Gate 2.

The pathway to Gate 2 for Southern Water involved significant consenting and delivery activities due to the urgent need to deliver the SRO in accordance with the Section 20 Agreement and our commitment to protect the environment. There is no such focus on any other water company to produce a new water resource source in the same timescales which further underlines the differences with the London Reuse scheme. Our SRO programme forecasts us making an application for a DCO in 2023 so that construction can start in 2026 for a 2030 completion. To support the preparations for a DCO, we were compelled to bring on additional programme resource and undertake activities in the pre-Gate 2 period.

We have offered to review our activity-based schedules with RAPID to assist in agreeing the right funding to deliver the programme and also allow RAPID to test their proposed Gate 3 guidance prior to publication.

3.2.2. Legal costs

There are several areas within the draft decisions where RAPID proposes to disallow legal costs. The following sections provide further evidence and explanation as to why we believe these costs are justified and would request that RAPID reconsiders in light of additional information.

We wish to provide RAPID with additional information, and some examples of activities to provide confidence that legal costs in respect of our Gate 2 submission have been incurred in relation to investigation, development and delivery of the solutions. Further examples can be provided to RAPID if that would be of assistance.

3.2.2.1. Regulatory Support: RAPID Interface and Gated Process

RAPID has stated, in relation to all the legal costs claimed under the category of 'Regulatory Support' that: *"The gated allowances are for the purpose of developing the solutions – these activities form regulatory advice for Southern Water and do not relate to solution development"*.

We realise now that we didn't provide RAPID with sufficient clarity on this previously, however these costs do relate to 'developing the solutions' as required by the RAPID Gated Process. The considerable amount of technical information, assessments and evidence we are required to submit at each Gate is inextricably linked to the development of the SROs, the robust assessment of alternatives and confirmation of the Selected Option and Back-up Option at Gate 2.

Legal advice and assistance are fundamental to the work undertaken for the Gated Process. The technical assessments and evidence submitted at the early gates underpin optioneering and scheme development decision-making that will ultimately be subject to the legal tests which form part of the DCO process. This has a high evidential threshold and includes legal advice and assistance, as well as legal risk review of the Options Appraisal Process and environmental assessments submitted at Gate 2.

The gated submissions are also required to be published online, reinforcing the need for careful legal scrutiny and risk assessment to ensure technical information is accurate and robust to support the planned DCO process. Failure to apply legal scrutiny risks impeding, and possibly prejudicing, the development of the SRO.

Therefore, the way that the Gated Process has been established to oversee the exploration of the SROs in the pre-construction stage means that legal advice and assistance and legal risk

assessment is required throughout the process as the work undertaken is a key part of ‘developing’ the solution.

To assist RAPID further, we have set out some examples of these activities below.

Table 3 Examples of Legal support to the RAPID process required for the SROs

Activity	Examples of this Activity
Legal advice inputting into the Gate 2 Deliverables	<i>Reviewing requirements for RAPID Gate 2</i> <i>Providing legal input and advice into scoping of Gate 2 deliverables to ensure legal risks and issues are considered at the point templates are prepared.</i>
Reviewing and assisting with Interim Update and Gate 2 documents	<i>Legal review of Interim Update submission documents including the legal aspects of and legal risks associated with the consenting strategy and the procurement strategy for desalination.</i> <i>Legal review of Gate 2 submission documents including the legal aspects of and legal risks associated with the consenting strategy and the procurement strategy for each solution type.</i> <i>Legal input into and advice on, and the legal risks associated with the environmental assessments required for the Interim Update and Gate 2 that underpin decision-making and the submissions</i>
Attendance at peer review meetings	<i>Attendance at peer review meetings for Gate 2 documentation to provide legal advice and assistance to author(s) and internal assurance reviewers for each document, including the consenting and procurement strategies, scheduling, and environmental assessments.</i>
Legal input into matters arising out of Gate 1 Final Determination	<i>Providing legal advice and assistance on the site selection process outlined as part of Remediation Action Plan to ensure that the process stands up to scrutiny under the DCO process and would minimise any legal risk.</i>

The legal advice and assistance and the legal risk assessment provided in relation to this category goes to the heart of the investigation, development and delivery of the solutions, in the same way that other technical and subject matter experts’ time in preparing for the submissions and evidence supporting them is captured and funded by the gated process, and we trust that RAPID will reconsider with regard to the funding of legal advice in relation to this category in light of the further information and explanations provided.

3.2.2.2. Regulatory Support: General (cross cutting across the 3 SROs)

RAPID has stated that: *“It is not clear what the purpose of this advice is; to the extent that it relates to the delivery of the solution (i.e. consenting, procurement, and contracting), we would expect it to have been allocated to one of the other categories of spend.”*

We fully accept that we did not provide RAPID with sufficient clarity in respect of this category of legal spend previously. We are happy to explain that when recording the legal time spent, these activities were not directly allocated to one of the other categories (i.e. Regulatory Support, Consenting, Procurement and Contracting). This is because the legal advice and assistance given was not easily identifiable to a specific or particular category but was considered to cover a number of different categories and/or the interrelationship between consenting, regulatory approval and delivery of the SROs, or attending project meetings which did not fit squarely within any of the other categories.

This includes attendance at meetings, including meetings with the project team, where a range of matters relating to the development of the SRO(s) was discussed, including the Gated Process, scheme development and optioneering, and key legal risks and issues related to the consenting and procurement of the SRO(s).

These are necessary costs relating to the effective management of legal advice and legal risk assessment for the WfLH Programme on the wide range of areas required to develop the SROs and secure the necessary consents and approvals for the successful delivery of the solution(s). Consequently, it would be entirely appropriate to include them as allowable costs.

To assist RAPID further, we have set out some examples of these activities below.

Table 4 Examples of Legal support which cross cutting areas required for the SROs

Activity	Examples of this Activity
Strategic advice in relation to the consenting, regulatory approval and delivery of the SROs	<p><i>Attendance and advising at weekly SRO strategy call with legal and the WfLH Programme management team</i></p> <p><i>Attendance and advising at weekly legal, enabling and planning call to discuss planning and enabling issues for delivery of the SRO(s)</i></p>
Attendance at project meetings	<p><i>Attendance at monthly legal team meeting to discuss key issues and legal risks with consenting and delivery of the SRO(s)</i></p> <p><i>Attendance at relevant Programme governance meetings for the consenting, regulatory approval and procurement of the SRO(s).</i></p>

With the assistance of these further explanations and information, RAPID should now be better placed to allow most, if not all, of the legal costs claimed.

As set out above, we would welcome the opportunity to meet with RAPID to discuss the steps we are taking to reflect RAPID feedback in relation to legal costs, and to improve cost efficiencies wherever possible.

3.2.3. Common Cost Allocation

In the Gate 2 submission, two methods were detailed for the allocation of common costs (PMO, Project Management, Legal, Planning & consenting, environmental, commercial) between the schemes. It was decided to split the costs equally between the SRO's equally (method 1, Table 9 Gate 2 Annex 6 Efficiency of Expenditure). Following the revised RAPID allowances it has become apparent that these common costs should be allocated in line with the allocation of allowance by RAPID, as it is more representative of the proportion of activity undertaken.

The common costs could be apportioned using either the Gate 2 allowance as set out in the letter from Ofwat to Southern Water on 8 December 2021⁶ (Basis 1), or the Gate 2 Draft decision allowances (Basis 2), see Table 5 and Table 6 below respectively.

Table 5 Reapportionment of Common Costs – Basis 1, Gate 2 allowances.

Scheme	Gate 2 Allowance (£k)	Re-Allocation Basis 1 (£k)	Gate 2 Costs Submission 6 th Dec (£k)	Change in Common Cost Allocation (£k)	Gate 2 Reallocated Total Costs Basis 1 (£k)
Havant Thicket	1,128	7.7%	2,730	-407	2,323
Water Recycling	6,090 ^[6]	41.6%	4,766	131	4,897
Desalination	7,420 ^[6]	50.7%	5,251	276	5,527

Table 6 Reapportionment of Common Costs – Basis 2, Gate 2 Draft Decision.

Scheme (£k)	RAPID Gate 2 Draft Decision Allowance (£k)	Re-Allocation Basis 2 (£k)	Gate 2 Costs Original (£k)	Change in Common Cost Allocation (£k)	Gate 2 Reallocated Total Costs Basis 2 (£k)
Havant Thicket	630	5.7%	2,730	-439	2,292
Water Recycling	4,590	41.7%	4,766	133	4,899
Desalination	5,800	52.6%	5,251	306	5,557

It is suggested that common costs are reapportioned using the Basis 2 approach, as this relates to the quantum of cost determined by RAPID to efficiently deliver the Gate 2 submission. As such, additional costs for Water Recycling of £133k and Desalination of £306k are requested. For activities and associated costs carried out by Gate 2, we need to allocate costs between options in some way, as the common activities were supporting multiple SROs being developed in parallel. For the costs incurred after Gate 2 (December 2021), such allocations will not be necessary as there is now just one Selected Option.

3.2.4. Calculation used for disallowed expenditure

Within the draft decision for Havant Thicket there is a reduction of £2.73m claimed expenditure by £1.60m to an allowed expenditure of £1.13m. A further £0.49m is then deducted from this figure for disallowed activities (PMO £331k and Legal £162k).

⁶ Letter from David Black to Ian McAulay, 8 December 2021, [Standard-gate-1-final-decision-Letter-Southern-Water.pdf](https://www.ofwat.gov.uk/Standard-gate-1-final-decision-Letter-Southern-Water.pdf) ([ofwat.gov.uk](https://www.ofwat.gov.uk))

We propose that the reduction in allowed expenditure should be applied once the disallowed activities have been discounted. Otherwise, the disallowed activities are effectively being discounted twice - first as part of the reduction to the allowed expenditure to £1.13m, and then by being struck out of the allowable expenditure in full.

Discounting the disallowed activities before applying the reduction of allowed expenditure leads to a total disallowed expenditure of £1.11m (as compared with £1.60m); a difference of £0.49m as illustrated in Table 7 below.*

Table 7 Alternative calculation

Expenditure	Cost
Claimed expenditure	£2.73m
Less total disallowed costs (Legal and PMO)	-£0.49m
	£2.24m
Less allowed expenditure	£1.13m
Total disallowed expenditure	£1.11m

*For ease of comparison, figures presented in this table are as per the draft decision.

3.3. Quality of solution development and investigation

3.3.1. Board Statement and assurance

3.3.1.1. Southern Water Board

This area was assessed as 'Poor' in RAPID's draft decision across all three solution types. RAPID has stated that *"It is very disappointing that Southern Water has been unable to provide assurance that one or more solutions will be in place and operating by the end of 2027"*.

It is not clear how RAPID has formed a view that Southern Water's Board could, at the time of the accelerated Gate 2 submission (December 2021), confidently provide assurance that one or more of the solutions could be in place and operating by the end of 2027, especially considering the Selected Option was only identified in late 2021.

We think that it is worthwhile mentioning that the 2027 date was the date iterated in the Section 20 Agreement as the potential implementation date for the long-term water scheme for alternative water resources as set out in our WRMP19, as may be revised by future Water Resource Management Plans, and that we are currently in the process of preparing WRMP24. We continue our discussions with EA⁷ and Defra, as to any amendments which may be required to the Section 20 Agreement to reflect our new Selected Option.

RAPID is aware that although we continue to scrutinise each aspect of the delivery schedule and take every opportunity to optimise delivery timescales and incorporate this into the schedule, we do not, and have not since Gate 1, considered it achievable to meet a 2027 delivery date.

⁷ Letter from Lawrence Gosden to Simon Moody (Environment Agency) and Paul Hickey (RAPID), dated 1 October 2021 <https://www.southernwater.co.uk/media/5437/letter-to-ea-and-rapid-011021.pdf>

We consider that we have been open and transparent about this position and made this clear to RAPID as part of our Gate 1 submission, in our Remediation Action Plan for Gate 1, and in our ongoing dialogue and engagement with RAPID.

In light of this, we would request that RAPID reconsiders its rating for this area given our efforts since Gate 1 to engage with RAPID on the change to the 2027 delivery date for the solution(s) as it is no longer achievable.

As confirmed in our accelerated Gate 2 submission, our Board is committed to delivery of our Selected Option being in operation by 2030. Our progress on the solution is commensurate with that delivery timeframe. We fully appreciate RAPID's expectation in the draft decisions for Southern Water's Board to provide assurance at future gates that the solution will be delivered at the earliest possible date and that there is no delay beyond 2030 at future gates.

3.3.1.2. Portsmouth Board statement

As confirmed by RAPID during the representation period, we can confirm that the letter signed on behalf of the Portsmouth Water Board was sent to RAPID on 6 December 2021 as part of the Gate 2 submission information following external due diligence assurance on behalf of both Boards. This relates to priority action 17 Havant Thicket Raw Water Transfer, which we believe to be complete.

3.4. Delivery Incentive Penalty

RAPID has in its draft decisions applied a 10% delivery incentive penalty on the Havant Thicket and Water Recycling solution. The reason cited for this penalty is stated as "*the solution should have been of a standard suitable for inclusion in a final WRMP. We are concerned that areas of the work are not yet at that standard*".

As a result of being on an accelerated track for SRO development through the RAPID gated process, the accelerated Gate 2 date of December 2021 was just over six months prior to the anticipated submission of Southern Water's WRMP24 (subject to an accelerated timetable) for June 2022.

We believe this is a challenge unique to Southern Water. Our understanding is that other water companies in the South-East will be making their Gate 2 submissions on 14 November 2022, approximately a month after the anticipated WRMP24 submission on 3 October 2022. We ask RAPID to appreciate that it is more straightforward to ensure options submitted at a standard (non-accelerated) Gate 2 would be developed to a standard suitable for inclusion in a final WRMP24 given that they are prepared for submission at roughly the same time.

We have been closely working with, and continue to work with, key stakeholders in RAPID, the Environment Agency, Defra, WRSE and others to improve synergies between the accelerated gated process, the development of WRMP24, the consenting process, and the emerging Regional Plan. This includes developing our schedule to promote alignment and efficiencies between the WRMP, consenting and the accelerated gated processes, to avoid duplication and inefficiency. An example of this is where we have been working with the Environment Agency and Defra to align timetables for WRMP24 consultation and Non-Statutory Consultation and Statutory Consultation for consenting so that the risk of consultee fatigue amongst stakeholders is minimised, and to improve alignment between consultation documents, using the same material where possible. We are keeping these alignment issues and opportunities under review as we manage these competing requirements. We are also hoping to discuss with RAPID in the coming

weeks and months the ways in which we can improve alignment between WRMP and consenting processes and the accelerated gated process, aligning these and providing efficiencies where possible.

However, there are circumstances where it is not possible to overcome the variance in timing between these competing processes. One example that has been highlighted in the draft decisions is the level of maturity of some of the water resource modelling and other technical water resource assessments at Gate 2. In the Havant Thicket draft decision RAPID has raised concerns that we have not clearly demonstrated that the solution meets the 1 in 500 drought resilience standard or provided a clear justification of the boundary date of 2040 for modelling future water resources requirements. Whilst we accept RAPID's view that there was not sufficient information available submitted at the accelerated Gate 2 to demonstrate that the solution meets the 1 in 500 drought standard or to provide a clear justification for the 2040 boundary as RAPID suggests, we would like to reassure RAPID that this activity is underway as part of the Regional Plan and WRMP24 preparation.

As explained above, it is recognised that some areas of required work are not yet at a standard suitable for inclusion in a final WRMP. However, we respectfully request that RAPID reconsiders application of the 10% delivery incentive penalty given that it was not technically feasible for Southern Water and Portsmouth Water to submit this information to a WRMP standard at the accelerated Gate 2.

During the response period Portsmouth Water and Southern Water have met with the Environment Agency to provide an update on the water resources position, the evolution of the SRO and future demands which feed into the WRMP24 and WRSE timescales for both Southern Water and Portsmouth Water. A pragmatic approach for completion of the priority actions associated with this topic has been taken to meet WRMP process commitments to provide evidence for each one without duplication of efforts or costs.

In the context of the delivery incentive penalty RAPID has also raised a concern that *“there has been insufficient stakeholder engagement, particularly with customers who will receive water from a changed source or recycled water”*.

As we approach our WRMP24 consultation and the consenting phase for our Selected Option, an extensive programme of consultation and engagement will ramp up, which will include engagement with customers in both Southern Water and Portsmouth Water's supply areas who will receive water from a changed source or recycled water.

Southern Water continues to work across the industry to inform customers on water recycling technology which will escalate as the solution matures. Our customer engagement plans are closely aligned with the consenting process associated with the development of the water recycling plant in order to maintain consistency of messaging and evolution of feedback from customers, stakeholders and regulatory bodies. Our customer strategy is intended to engage with both Southern Water's and Portsmouth Water's customers as water recycling will impact, whether directly or indirectly, both companies and we are keen to continue to engage with customers to continue to mitigate any concerns on the new technology.

A further concern raised by RAPID was that *“there has been insufficient consideration of impacts of potential pipeline routes”*.

The pipeline route selection process is a key element of scheme development activity which is currently underway and is being prepared in advance of the Non-Statutory Consultation, where a

number of options will be presented to consultees. The route selection will then be developed further at Statutory Consultation, taking into account consultation responses received at Non-Statutory Consultation and reflecting on these. We would like to reassure RAPID that the pipeline route selection process is being carried out using a robust methodology that follows the required sequence with the principal sites being identified first so that a pipeline between these sites can be selected based on a robust set of sensitivity criteria. We will be working closely with the EA and Natural England in this space and Southern Water looks forward to reporting on this to RAPID at Gate 3.

3.5. Proposed changes to partner arrangements

There are currently no proposed change to the partnership arrangements between Portsmouth Water and Southern Water for future gates with the alignment of Havant Thicket Reservoir and the Havant Thicket Raw Water Transfer (Option B.4) although following the advice of RAPID we have been investigating alternative options.

We are reviewing financial arrangements between Portsmouth Water and Southern Water (whereby currently Southern Water receive 100% of RAPID funding and pass costs to Portsmouth Water). As of the 12th April 2022, commercial conversations are currently in progress, and are expected to be concluded following receipt of RAPID Gate 3 guidance and confirmation of Gate 3 and Gate 4 allowances. We propose reporting to RAPID on any agreed amendment to the current financial arrangements at this point, along with governance which will also be required to demonstrate efficiency of expenditure as we approach the accelerated Gate 3 submission.

We continue to work closely with Portsmouth Water at all levels to align delivery of the projects and recognise that outstanding funding decisions pose a risk to the ability to align the projects for maximum efficiency.

3.6. Actions and recommendations

For proposed delivery dates of the priority actions for both Water Recycling and Havant Thicket SROs please refer to section 7: Priority actions.

As we have discussed with RAPID, (as well as individually with the EA), we do not consider that all of the priority actions set out in the appendix to the draft decision were possible (or needed) to be completed by the accelerated Gate 2 date. Further, whilst we intend to complete some priority actions by the proposed 30th June 2022 date, others are planned to be complete beyond this date as discussed below.

The timings of some Gate 2 requirements (for example: several of the water resources related requirements relating to WRMP24 due June 2022 and WRSE regional activity) were not compatible with the accelerated Gate 2 date of December 2021 and provide a direct efficiency conflict between the need to accelerate gated activity to support Southern Water's Section 20 Agreement and necessary alignment to industrywide activity such as WRSE consultation outputs.

We are also working directly with the Environment Agency to review the proposed dates of environment related priority actions which cannot be completed by the 30th June 2022. We have discussed a pragmatic approach designed to alleviate concerns in this space and increase mutual understanding of external influences which may impact delivery risk of the overall programme.

Accordingly, we have provided completion dates aligned to our delivery schedule, designed to meet an operational date of early 2030. This is intended to minimise any duplicative effort and associated inefficiency whilst demonstrating our continued engagement and alignment with other statutory processes and timelines such as WRMP and pre-planning work leading up to DCO submission.

It is noted that the actions required as part of the Gate 3 submission will influence the assessment of the Gate 3 submission. We look forward to receiving the accelerated Gate 3 guidance in good time to ensure good alignment between the differing timing requirements of WRMP (and the Regional Plan), Section 20 Agreement and accelerated gate deliverables. Better alignment between these processes will help support and demonstrate efficiency of expenditure for Gate 3.

3.7. Gate three activities

3.7.1. Gate 3 Submission Date

In our Gate 2 submission we proposed a Gate 3 date of end November 2022 for both the Havant Thicket Raw Water solution (our Selected Option) and the Water Recycling solution (our Back-up Option). Prior to the submission we had already begun engagement with RAPID and individual regulators to determine if there was a more appropriate date for Gate 3 to alleviate emerging concerns around managing the requirements of the Gate 3 submission alongside the requirements of other processes that are needed for project delivery, including Consenting, DPC, WRMP and PR24.

As of 12th April 2022 we await Gate 3 guidance from RAPID and are working with PR19 template, provided in the December 2019 guidance⁸ which informed our Annex 10, Gate 3 Activity Plans as part of our Gate 2 submission. We would welcome the opportunity to work with RAPID to review the PR19 template and our detailed Gate 3 Activity Plans to help create a guidance that would apply to both the accelerated and standard gate SROs and to consider how we can improve synergies with other programmes of work required for the development of the solutions such as WRMP24 and PR24. Our Cost Forecast to Gate 3 within our Gate 2 submission, Annex 6, section 1.3 provides some insight into the activities we assume necessary to complete, however this needs to be reviewed once the Gate 3 guidance is available.

Currently we believe a target submission date of 28th February 2023 to be realistic against our current delivery schedule to complete the Gate 3 requirements as per PR19. As we have set out above, we would welcome the opportunity to provide input into the Gate 3 guidance while it is in draft form. However, once we are in receipt of the final Gate 3 RAPID guidance, we will assess and confirm with RAPID if there is any risk (or opportunity) relative to this submission date and if required, agree an amendment to this date together with any emerging financial impacts resulting from administering the new guidance.

⁸ PR19 Draft Determination, Strategic regional water resource solutions appendix, July 2019, table 2.1 [PR19-draft-determinations-Strategic-regional-water-resource-solutions.pdf](https://www.ofwat.gov.uk/PR19-draft-determinations-Strategic-regional-water-resource-solutions.pdf) (ofwat.gov.uk).

4. Water Recycling SRO

4.1. Evidence of Efficient Expenditure

4.1.1. Gate 3 expenditure

In section 4.1 and section 8 of the Water Recycling SRO draft decision, RAPID asked Southern Water to propose what level of funding would be required to deliver sufficient Gate 3 activities to enable Option B.5 to be an effective back-up.

As described in our Gate 2 submission Annex 10 Gate 3 Activity Plan, we are working on decision milestones for the Water Recycling SRO Back-up option which will allow us to confirm if, and when, it can be removed from the gated process. Once confirmed, we will inform RAPID, and other stakeholders.

Our forecast cost for this option was provided in our Gate 2 submission (Annex 6, section 1.3) up to November 2022 (£498k in 17/18 prices). We are expecting a decision to be reached on or before this date as to its continued feasibility relating to the future water resource needs within the WRMP process.

4.1.2. Cost Adjustments from Gate 2

4.1.2.1. Programme and project management costs & Legal costs (Common Costs)

Please see section 3.2, Evidence of Efficient Expenditure, which provides additional evidence applicable to all three SROs.

4.1.2.2. Data collection, sampling and pilot trials

In the Gate 2 draft decision costs associated with sampling undertaken in the USA was deemed to be inefficient and disallowed (totalling £158,000). We would like to provide RAPID with further information here as to why these costs were not inefficient and should be allowed as part of the ringfenced spend as they were required to support the investigation and development of the SROs to Gate 2 requirements.

In September 2019 we commenced our search for accredited laboratories able to perform analytical tests of compounds present in a wastewater matrix that could be of concern in a planned water recycling context. This was three months ahead of needing to start the first winter catchment sampling event which took place in December 2019. In order to manage costs efficiently, we plan catchment sampling events on a seasonal basis so that costs are only occurred when necessary.

Six laboratories were approached and provided with the list of compounds (Schedule 1 and 2 as well as Contaminants of Emerging Concern (CECs) including Pharmaceuticals and Personal Care Products (PPCPs)) for which sampling was required.

Several of the laboratories that we approached were either not responsive or not able to sub-contract work via our framework laboratory. Whilst one laboratory may have been suitable, the timeframes were not workable as there would have been a need to enter into a new sub-contract agreement with our framework laboratory and we would have been unable to procure the data we needed in time for the programme deadline for Gate 1. The challenge we faced with analytical testing was predominantly in relation to measuring for CECs, specifically PPCPs. Our framework laboratory, although UKAS accredited, did not have accredited analytical methods for PPCPs developed prior to 2019 when work on the water recycling scheme commenced.

Therefore, to mitigate these risks, we decided to move forward with a combination of our UK framework laboratory (for the determinands the laboratory was capable of testing) and a United States (US) based ISO/IEC17025 accredited laboratory, experienced in testing for these PPCPs to meet the US Environmental Protection Agency's stringent limits. This approach would enable us to meet the December 2019 sampling event window.

We continued conversations with the UK-based laboratory which would require a sub-contract agreement in place with our framework laboratory with a view to potentially using this laboratory for the next catchment event at the beginning of March 2020 i.e. the spring 2020 event) for testing of PPCPs. However, with the onset of Covid-19 and the need for analytical testing increasing nationally, this laboratory along with most other laboratories in the UK (and globally), that are equipped to test for CECs/PPCPs were unable to accept samples that were not related to Covid-19 testing, meaning that we were unable to use this laboratory and also meet the required reporting timescales for the Gate 2 report.

We therefore continued using the US-based laboratory to perform required analytical testing on circa 100 PPCPs, while giving our framework laboratory time to develop and achieve accreditation for their analytical methods. In addition, and importantly, the limits of detection (LOD) for the CECs testing being undertaken by the US-based laboratory were at globally acceptable levels based on published literature, which was important in the context of the development of our water safety plans.

We used the water quality data generated by the US-based laboratory to produce water safety plans that assessed and considered the water quality risks from the pilot plant at Peel Common compared to the River Itchen as well as the wastewater catchment. This data was also used in the development of Quantitative Microbial Risk Assessment (QMRA) and Quantitative Relative Chemical Assessment (QRCA) and these results were presented to the DWI at consultation meetings prior to the Gate 2 submission as well as in the Gate 2 report. QMRA and QRCA outputs complement the risk analysis required by water companies as part of their water safety plan documents and using in a water recycling context can be considered as a novel approach. Our framework laboratory was able to perform the full list of PPCPs using unaccredited analytical methods in May 2021 however, comparison between that and the US-based laboratory data showed discrepancies in a number of determinands that required further investigation by both the US-based laboratory and our UK framework laboratory.

Lessons learned from other water companies demonstrated that even if laboratories are UKAS accredited, results may not always be similar and errors are still possible. Therefore using our framework laboratory without any accredited testing methods for PPCPs presented more risk, from a confidence in the data standpoint, to the water safety planning exercise. Using the US-based laboratory to maintain consistency in the data at an acceptable LOD was deemed a lower-risk and more acceptable option.

It is also worth noting that our framework laboratory is working hard to eliminate the discrepancies identified in their data and have started to work on obtaining accreditation for their PPCPs testing methods.

We do not intend to send any further samples to the US for testing due to the cost implication, however until our framework laboratory is able to develop accredited testing methods for the PPCPs, the data obtain from them will carry forward these underlying risks.

The US-based laboratory is accredited under ISO/IEC 17025, which is the international standard used for the accreditation of testing and calibration laboratories, updated in 2017. UKAS has been working with its accredited laboratories over the past three years to ensure that all UKAS-

registered laboratories registered with it were successfully transitioned to the ISO/IEC/17025 before the deadline of 1st of June 2021.⁹

We therefore believe the costs expended in this area (£158,000) were efficient and required to mitigate a potential quality risk in what is still an emerging accreditation position for the UK laboratories. We would ask that RAPID reconsiders in light of this additional information whether this expenditure may be allowed as part of its final decision for the Water Recycling solutions.

Table 8 Cost position below highlights the Water Recycling position following reapportionment of common costs and reapplication of the sampling costs (which are outside of the common cost reallocation).

Table 8 Cost position

Scheme	Gate 2 Allowance (£k)	Gate 2 Re-Allocation Basis 2 (£k)	Gate 2 Costs Challenged (£k)	Early Gate 3 (£k)	Total Gate 2 Allocation (£k)
Water Recycling	6,090	4,899	158	Not included	5,057

4.2. Quality of solution development and investigation

4.2.1. Drinking water quality

We acknowledge phrasing used in the technical annex (section 2.2.9 p.45) could have been clearer and recognise the concern this caused. The upgrade work at the Otterbourne WSW required under Notice (ref. SRN3698) from the DWI is a statutory requirement however the long term strategy in the Notice is related to the development of the SRO(s) but is not to be funded by the RAPID gated process.

There are however costs associated with further work required at Otterbourne WSW as a direct result of the development of the SRO (whether we deliver the Selected Option or the Back-up Option) and we will continue to work with the DWI and RAPID to demonstrate overall compliance to ensure appropriate apportionment between the SRO-related activity and other activities.

⁹ <https://www.ukas.com/resources/latest-news/iso-iec-17025-transition-extended/>

5. Desalination SRO

5.1. Evidence of Efficient Expenditure

5.1.1. Early Gate 3 Costs

In the draft decisions document the costs for early Gate 3 activities of £1.18m were disallowed. These activities were completed prior to the Interim Update of 27th September 2021, as part of our Option Appraisal Process at which point desalination was still the preferred option as set out in WRMP19 with an 'All Best Endeavours' requirement directly relating to it.

The Option Appraisal Process resulted in the de-selection of the desalination options as the lowest ranking options and subsequently these options being removed from the gated process. We therefore request that as part of the RAPID final decision the funding is allowed.

The table below highlights early Gate 3 desalination expenditure related to scheme activities previously reported in the "Accelerated Gate 2 Annex 6, Efficiency of Expenditure ". Costs no longer classified as early desalination costs have been removed and common costs have been re-allocated /re-apportioned to early Gate 3 Desalination using re-allocation basis 2 as detailed in section 3.2.3.

Table 9 early Gate 3 desalination expenditure

	May-2021	Jun-2021	Jul-2021	Aug-2021	Sep-2021	Oct-2021	Nov-2021	Dec-2021	Total
Desalination (£k)	142	191	181	197	198	91	49	7	£1,056

The values for the Desalination project recorded between October and December 2021, reflect the continuation of project activity underway at that time. This included catchment sampling and analysis which involved a boat crew collecting samples at locations across the Solent followed by laboratory analysis. An internal review concluded that it would have been comparable in terms of abortive fees to cancel these contracts, as it was to complete them. In line with good engineering practice, the process design team were able to finalise their analysis and design works, with the results captured to help build our knowledge base on this novel technology.

We propose to utilise the Gate 2 allowance to recover the early Gate 3 desalination activities incurred as a result of its requirement to progress the Desalination option in WRMP19 using All Best Endeavours. Following this £807k can be returned to customers, see table below.

Table 10 Early Gate 3 costs

Scheme	Gate 2 Allowance (£k)	Gate 2 Re-Allocation Basis 2 (£k)	Early Gate 3 (£k)	Total Gate 2 + Early Gate Three (£k)	Gate 2 Allocation vs Spend (returned to customers) (£k)
Desalination	7,420	5,557	1,056	6,613	807

6. Cost Summary

In line with the RAPID decision, early Gate 3 activities for Havant Thicket and Water Recycling have not been considered and will be requested at Gate 3. We propose to carry forward unspent allowance for Water Recycling, as a portion of this is being progressed to Gate 3. For Desalination, £807k is proposed to be returned to Customers.

Table 11 below summarises the current cost position. This includes the reallocation of common costs using basis 2 and also application of the sampling costs as per Section 4.1.2.2. In line with the RAPID decision, early Gate 3 activities for Havant Thicket and Water Recycling have not been considered and will be requested at Gate 3. We propose to carry forward unspent allowance for Water Recycling, as a portion of this is being progressed to Gate 3. For Desalination, £807k is proposed to be returned to Customers.

Table 11 Cost position

Scheme	Gate 2 Allowance (£k)	Gate 2 Re-Allocation Basis 2 (£k)	Gate 2 Costs Challenged	Early Gate 3 (£k)	Total Gate 2 Allocation (£k)	Returned to Customers (£k)
Havant Thicket	630	1,278		Not included	630	-
Water Recycling	6,090	4,899	158	Not included	5,057	-
Desalination	7,420	5,557		1,056	6,613*	807

*Early Gate 3 costs for desalination are claimed against the Gate 2 allowance.

+Early Gate 3 costs for Havant Thicket and Water Recycling are not included to align with RAPID’s decision.

7. Priority actions

Please also refer to section 3.6 Actions and recommendations which discusses our concerns regarding the request for 30th June 2022 completion date in some instances. Accordingly, we have provided completion dates aligned to our delivery schedule, designed to meet an operational date of early 2030. This is intended to minimise any duplicative effort and associated inefficiency whilst demonstrating our continued engagement and alignment with other statutory processes.

It should be noted that these dates are dependent on timely availability and response by external parties as part of pre-application work leading up to DCO submission.

Table 12 Havant Thicket Raw Water SRO priority actions

Havant Thicket Raw Water Number	Section	Detail (to be completed by 30th June 2022)	Completion Date
1	Solution Design	Provide a well-developed plan for detailed and focused customer engagement. This should include all demographics, well vs less informed consumers & types of engagement etc. Commence more focused consumer engagement particularly around re-cycling & customer acceptability - distinct from environmental benefit/impact.	30 th June 2022
2	Solution Design, Programme & planning	Engage regularly with environmental regulators to deliver a "no surprises" approach and to access their site specific knowledge of constraints, risks, avoidance and mitigation measures and opportunities for delivery of net gain to help identify deliverable options. As part of this regular engagement, progress Method Statements for environmental assessments rapidly to include specific detail needed to undertake site specific work and detailed assessment to provide a sufficiently robust evidence base	30 th August 2022
3	Evaluation of Costs & Benefits	Provide the water resource benefit (peak and average deployable output) available from the solution under 1 in 500 drought resilience and clear evidence of this. Provide the water resource benefit which has been included within initial regional model runs. Explain how the non-SRO 21MI/d transfer from Portsmouth Water has been accounted for within the supply demand balance and that this has not been double counted as supporting the SRO water resources benefit to meet the need.	30 th September 2022
4	Evaluation of Costs & Benefits	Confirm resilience benefits for consumers able to be supplied by the options in 1 in 500 year scenario to help inform the viability of options	30 th September 2022
5	Evaluation of Costs & Benefits	Undertake sensitivity testing around selected future needs horizon of 2040 to demonstrate best value option is being taken forward.	30 th September 2022
6	Environment	Provide further justification for the shortlisting of pipeline routes 3 & 4 from Annex 3 Sections 2.4 and 2.5.	30 th June 2022
7	Environment	Clearly consider and set out what is considered standard best practice in construction vs. mitigation of environmental impacts from the environmental assessments described in Annex 3 Section 2.5.	30 th June 2022
8	Environment	Detail the metrics used to monetise the ecosystem services assessed in the Natural Capital Assessment.	30 th June 2022

9	Environment	Characterise the impacts of the eventual discharge of water derived from Water Recycling Plant and spring sources mixed within Havant Thicket Reservoir post supply and use on the highly designated chalk catchments and their ecology where they may be the receiving water.	30 th November 22
10	Environment	Include Sites of Importance for Nature Conservation (SINCs) in the data sources for review of pipeline watercourse crossings.	30 th June 2022
11	Environment	Proposed pipeline routes 1 & 2 need to be reviewed to avoid conflict with the agreed Article 4.7 compensation package for Havant Thicket Reservoir	30 th June 2022
12	Environment	Present stronger evidence to demonstrate that pipelines won't prevent delivery of mitigation measures - in particular, at the channel crossing locations or where the pipeline is close to the river corridor	30 th June 2022
13	Environment	Assess the impact of proposed pipelines on floodplain hydrology and any associated potential adverse impact on ecology.	30 th June 2022
14	Environment	Provide an appropriate level of supporting evidence for the conclusion that Likely Significant Effects on Marine Conservation Zones can be scoped out at this stage	30 th August 2022
15	Environment	Review with environmental regulators whether the current environmental monitoring programme proposals adequately address the needs to capture seasonal variability, spatial variation etc. to provide a sufficient database to support the required SEA, HRA and WFD	30 th June 2022
16	Environment	Review with environmental regulators whether currently planned assessments adequately cover potential in-combination effects	30 th August 2022
17	Board Statement & Assurance	Portsmouth Water should provide a board assurance statement, in the form included within the solution summary, signed for or on behalf of the Board.	COMPLETE 6 th December 2021

Table 13 Water Recycling SRO priority actions

Water Recycling Number	Section	Detail (to be completed by 30th June 2022)	Completion Date
1	Operational Utilisation	Confirm the volumes of effluent available from the wastewater treatment works under dry weather flows during future worst case scenarios and assurances that these can meet the required volumes (after process losses) for the WRP to produce the required flows to address the deficit.	30 th June 2022
2	Stakeholder Engagement	Provide a well-developed plan for detailed and focused customer engagement. This should include all demographics and well vs less informed consumers & types of engagement etc. Commence more focused consumer engagement particularly around water recycling & customer acceptability - distinct from environmental benefit/impact.	30 th June 2022
3	Interaction with other solutions	Explain how solution scalability to meet a needs envelope of 87 to 95Ml/d (Annex 13 section 3.2.2) has been accounted for within initial regional modelling	30 th June 2022
4	Water Resource benefits	Confirm what the deficit is and what the solution is designed for and able to achieve. Confirm plan to investigate the volume of effluent available under various dry weather scenarios, including the worst case.	30 th June 2022
5	Resilience benefits	Confirm resilience benefits for consumers able to be supplied by this solution in 1 in 500 year drought scenario to help inform the viability of the solution	30 th September 2022
6	Drinking Water Quality	Demonstrate equivalence between the final effluent quality at Budds Farm and Peel Common and confirm that the proposed WRP is able to treat this	30 th June 2022

7	Drinking Water Quality	Ensure full compliance with responsibilities under the Regulations and where any associated risks may lay. We remind the company that water recycling technology, as with all treatment technologies, does not require regulatory approval, however it is the company's responsibility to ensure that any treatment process meets the requirements of the Water Supply (Water Quality) regulations in full.	30 th June 2022
8	None	<i>Numerical error in draft decision document RAPID confirmed to keep original numbering to prevent confusion</i>	n/a
9	Programme and planning	Engage with the environmental regulators' site specific knowledge of constraints, risks, avoidance and mitigation measures and opportunities for delivery of net gain to help identify deliverable options. Method Statements for environmental assessments must be progressed rapidly beyond a focus on the process to the specific detail needed to undertake site specific work and detailed assessment to provide a sufficiently robust evidence base	30 th August 2022
10	Environment	Provide further justification for the shortlisting of routes 3 & 4 as outlined in annex 3 sections 2.4-2.5. Clearly distinguish best practice from mitigation measures.	30 th June 2022
11	Environment	Present robust evidence to demonstrate that pipelines won't prevent delivery of mitigation measures, in particular at the channel crossing locations or where the pipeline is close to the river corridor	30 th June 2022
12	Environment	Include Sites of Importance for Nature Conservation (SINCs) in exclusion map data sources for review of pipeline watercourse crossings	30 th June 2022
13	Environment	Assess the impact of proposed pipelines on floodplain hydrology and any associated potential adverse impact on ecology.	30 th June 2022
14	Environment	Review with environmental regulators whether currently planned assessments adequately cover potential in-combination effects	30 th August 2022
15	Environment	Review with environmental regulators whether the current environmental monitoring programme proposals adequately address the needs to capture seasonal variability, spatial variation etc. to provide a sufficient database to support the required SEA, HRA and WFD.	30 th June 2022