



**Affinity Water**  
Taking care of your water

# SESRO

Supporting Document F-2: Efficiency of Spend

## Notice

### Position Statement

- This document has been produced as the part of the process set out by RAPID for the development of the Strategic Resource Options (SROs). This is a regulatory gated process allowing there to be control and appropriate scrutiny on the activities that are undertaken by the water companies to investigate and develop efficient solutions on behalf of customers to meet future drought resilience challenges.
- This report forms part of suite of documents that make up the 'Gate 2 submission.' That submission details all the work undertaken by Thames Water and Affinity Water in the ongoing development of the proposed SROs. The intention of this stage is to provide RAPID with an update on the concept design, feasibility, cost estimates and programme for the schemes, allowing decisions to be made on their progress and future funding requirements.
- Should a scheme be selected and confirmed in the companies' final Water Resources Management Plan, in most cases it would need to enter a separate process to gain permission to build and run the final solution. That could be through either the Town and Country Planning Act 1990 or the Planning Act 2008 development consent order process. Both options require the designs to be fully appraised and in most cases an environmental statement to be produced. Where required that statement sets out the likely environmental impacts and what mitigation is required.
- Community and stakeholder engagement is crucial to the development of the SROs. Some high level activity has been undertaken to date. Much more detailed community engagement and formal consultation is required on all the schemes at the appropriate point. Before applying for permission Thames Water and Affinity Water will need to demonstrate that they have presented information about the proposals to the community, gathered feedback and considered the views of stakeholders. We will have regard to that feedback and, where possible, make changes to the designs as a result.
- The SROs are at a very early stage of development, despite some options having been considered for several years. The details set out in the Gate 2 documents are still at a formative stage and consideration should be given to that when reviewing the proposals. They are for the purposes of allocating further funding not seeking permission.

### Disclaimer

This document has been written in line with the requirements of the RAPID Gate 2 Guidance and to comply with the regulatory process pursuant to Thames Water's and Affinity Water's statutory duties. The information presented relates to material or data which is still in the course of completion. Should the solution presented in this document be taken forward, Thames Water and Affinity Water will be subject to the statutory duties pursuant to the necessary consenting process, including environmental assessment and consultation as required. This document should be read with those duties in mind.

## Contents

<b>Notice</b>	<b>1-2</b>
<b>Contents</b>	<b>1-3</b>
<b>Tables</b>	<b>1-3</b>
<b>1. Introduction</b>	<b>1-4</b>
1.1 Context and Purpose of document	1-4
1.2 Structure and content of this document	1-4
<b>2. Cost Efficiency for Gate 2</b>	<b>2-5</b>
2.1 Introduction	2-5
2.2 Cost breakdown for Gate 2 work	2-5
2.2.1 Cost breakdown for Programme and Project Management	2-7
2.2.2 Cost breakdown for Feasibility Assessment and Concept Design	2-8
2.2.3 Cost breakdown for Environmental Assessment	2-9
2.2.4 Cost breakdown for Procurement Strategy	2-11
2.3 Efficiency of Gate 2 spend	2-11
2.3.1 Procurement Efficiency	2-14
<b>3. Proposed cost forecast for Gate 3</b>	<b>3-18</b>

## Tables

Table 2.1: Deflationary factors used for actual cost calculations .....	2-5
Table 2.2: Gate 2 Efficiency of Spend Summary (as per RAPID template) .....	2-6
Table 2.3: Programme and Project Management, breakdown of Gate 2 costs .....	2-7
Table 2.4: Feasibility Assessment and Concept Design, breakdown of Gate 2 costs .....	2-8
Table 2.5: Environmental Assessment, breakdown of Gate 2 costs.....	2-9
Table 2.6: Procurement Strategy, breakdown of Gate 2 costs.....	2-11
Table 2.7: Mapping of Efficiency initiatives to Gate 2 Work Packages.....	2-13
Table 2.8: Procurement approach followed for technical workstreams .....	2-15
Table 3.1: Gate 3 Forecast Costs (estimated at Gate 2 and subject to change) .....	3-18

## 1. Introduction

### 1.1 Context and Purpose of document

1.1 The Gate 2 submission for SESRO consists of a wide range of technical supporting documents, to provide RAPID with the evidence required to assess the robustness and completeness of the analysis completed to Gate 2.

1.2 This document is Supporting Document F-2, Cost Efficiency report.

1.3 It provides an assessment of the efficiency of the costs incurred up to Gate 2 and an estimate of the costs to deliver Gate 3. It should be noted that this information is based upon the current project scope and known issues only, as required to meet the requirements set out by RAPID for Gate 2. Therefore, it should be treated as indicative and will be subject to change as the project progresses.

### 1.2 Structure and content of this document

1.4 This document is structured as follows:

- Section 2 provides details of the costs required to enable the efficient delivery of the Gate 2 activities
- Section 3 details the proposed costs for the next phase of the project (i.e. to RAPID Gate 3). It should be read in conjunction with Supporting Document F-1 – Project Delivery Plan, which details the scope and programme for the next phase of the project.

## 2. Cost Efficiency for Gate 2

### 2.1 Introduction

2.1 This section is split into two parts: The first documents the magnitude of the costs to Gate 2 and the second explains the efficiency of those costs.

### 2.2 Cost breakdown for Gate 2 work

2.2 The costs between Gate 1 and Gate 2 are presented in the format specified by RAPID in Table 2.2 below. For accurate comparison with the Final Determination allowance, as requested by RAPID, actual costs captured at an activity level are deflated back from actual costs to a 2017/18 cost base using Thames Water's Internal Business Plan (IBP) deflationary factors, based upon the CPIH (November 2019 dataset) index and the timing of delivery of each costed activity (see Table 2.1 below).

*Table 2.1: Deflationary factors used for actual cost calculations*

AMP7	Deflation Factors *
Year 1 (2020/21)	0.9469
Year 2 (2021/22)	0.9283
Year 3 (2022/23)	0.9102

\* from actual costs back to 2017/18 cost base

- 2.3 Overall, the costs to Gate 2 are £7.2m, which is £21.6M (73%) below the RAPID Final Determination allowance for this SRO.
- 2.4 As standard for Thames Water, and as applied at Gate 1, where applicable company overhead has been charged to the elements of the company's spend with the overhead allocated in proportion to the workstream costs.
- 2.5 In accordance with RAPID requirements, a more detailed breakdown is provided for any cost item that exceeds £500k. For this SRO at Gate 2, this applies to:
- Programme and project management
  - Feasibility Assessment and Concept Design
  - Environmental Assessment
  - Procurement Strategy

Table 2.2: Gate 2 Efficiency of Spend Summary (as per RAPID template)

Category	Activity	Expenditure (£, 2017-2018 prices)	% of Total Expenditure	Description of Activity	RAPID Guidance
Programme & Project Management	Planning, management, governance and assurance of the project	£1,076,283	14.9%	Programme Manager, Project controls and programming support, Assurance, Project Director and Executive governance	Detail costs for all activities associated with programme management and governance, day-to-day project management (including costs for any external project managers utilised), and assurance.
Feasibility Assessment and Concept Design	All engineering design and feasibility investigations	£1,051,011	14.5%	Engineering design and all associated studies (e.g. flood risk, rail and access feasibility), Network Rail costs, client technical direction, dam safety engineer, cost and carbon estimating	Detail all costs for activities associated with undertaking a feasibility assessment and initial concept design.
Option benefits development and appraisal	Analysis of potential benefits from the scheme	£396,457	5.5%	Water resources modelling, DO assessment, long-term utilisation analysis, hydrological losses, WRSE investment modelling (sensitivity), cost-benefit analysis and NCA	Detail costs for all activities associated with development of the options benefits and impacts (water resource, carbon, and wider best value, plus direct costs associated with the appraisal of the option against sub-options or alternatives). Relevant assessments should be consistent with the water resources planning guidelines for 2024.
Environmental Assessment	Appraisal of environmental impacts and initial mitigation strategies, including engagement with environmental regulators	£2,781,265	38.5%	EA and NE costs, water quality modelling, 2D modelling of weir pools, reservoir physical and algal modelling, WFD and aquatic ecological assessments, desk-based assessments of high risk environmental issues, initial HRA, BNG assessment, licensing strategy, microclimate impact assessment, visualisation tool	Detail costs for any environmental assessments, such as Strategic Environmental Assessments, Habitat Risks Assessments, and other activities such as considering in-combination effects and assessing environmental risk. Include regulator costs for the Environment Agency and Natural England.
Data Collection, Sampling, and Pilot Trials	All field based sampling and data collection	£272,704	3.8%	Aquatic ecological surveys, water quality survey (R.Thames and R.Lea), algal surveys and experimentation, Aerial photographic survey	Detail costs for any activities related to data collection, sampling, and pilot trials, such as drinking water quality sampling and considerations and monitoring,
Procurement Strategy	Consideration of options for procurement of scheme	£505,736	7.0%	Strategic review of procurement routes, client governance, external advisory services and steering group on commercial matters	Detail costs for any activities associated with developing the procurement strategy, including assessment for potential direct procurement for customers' delivery.
Planning Strategy	Consideration of options to consent the scheme	£497,372	6.9%	OCC costs, strategic planning review and DCO strategy, land access and acquisition advice	Detail costs for all activities associated with planning strategy and the pre-planning application activity plan, such as land referencing, field surveys, environmental permitting plans.
Stakeholder Engagement	All engagement activity and customer preference studies	£244,816	3.4%	Customer research and preference studies, stakeholder lead for both partner companies, PR support for engagement process, support to WRSE engagement processes	Detail costs for all activities associated with customer and stakeholder engagement related to the solution.
Legal	Legal advice, as required	£403,190	5.6%	Legal advice and assurance on various issues and policies, including WFD assessment, land access and Gate 2 reporting	Detail costs associated with any legal activities related to the solution.
<b>Other</b>		£0	0.0%		
<b>Total</b>		<b>£7,228,833</b>	<b>100%</b>		
<b>Gate 2 Allowance</b>		<b>£28.9m</b>	-		<i>Including Gate 1 underspend</i>
<b>Gate Under/Overspend</b>		<b>£21,671,167</b>	<b>73.57%</b>		

## 2.2.1 Cost breakdown for Programme and Project Management

2.6 The breakdown of spend in this WBS is shown in Table 2.3 below.

Table 2.3: Programme and Project Management, breakdown of Gate 2 costs

Activity	Spend	% total	Justification or need
<b>Technical Assurance - environmental</b>	£22,381	2%	Quality assurance by external advisors of critical aspect of future scheme delivery <sup>5</sup>
<b>Board Assurance</b>	£73,454	7%	Quality assurance by external advisors across entire programme to ensure RAPID requirements are met <sup>5</sup>
<b>Project controls support</b>	£43,522	4%	Control of cost and programme
<b>Programme Manager</b>	£278,604	26%	Oversight across entire programme <sup>1</sup>
<b>Programme Director and Exec.</b>	£435,898	41%	Corporate Governance across programme, on behalf of both partner companies
<b>Programme Management Board</b>	£68,883	6%	
<b>PMO support</b>	£120,945	11%	Assistance with reporting, estimating and progress tracking, to maintain programme control
<b>Remaining Contingency</b>	<i>£32,596</i>	<i>3%</i>	<i>Expected to be removed from final reconciliation</i>
<b>TOTAL</b>	<b>£1,076,283</b>	<b>100%</b>	

2.7 The PMO support costs at Gate 2 reflect the complexity of the SESRO project. For a scheme the scale, duration, cost and complexity of SESRO, it is necessary to mobilise and operationalise a whole series of ‘client-side’ governance, management and control functions. These will be established by the promoters to ensure that the project is delivered safely, to time, budget and at the required level of quality and to ensure that it can be operated safely and effectively in the long-term. These systems and teams need to be in place at Gate 2, to ensure that the challenging delivery timescales outlined in this document can be achieved. The functions that need to be established in advance include:

- Governance and oversight, with the creation of a new Project Delivery Directorate and Portfolio Management Office (PMO) to ensure tight control and efficient consistency in approach and delivery;
- Establishment of project control systems, for the monitoring, tracking and reporting of project progress to ensure efficient delivery of all subsequent phases;

<sup>1</sup> procured and run between SESRO and T2AT to ensure efficiency

- Creation of new supporting roles, to ensure the right level of engagement with key stakeholders including a new engagement and consents strategy lead, senior legal counsel and regulation lead;
- Establishment of a commercial oversight team, who will manage and deliver all of the commercial and procurement aspects of the programme, including professional services supply chain and scheme procurement. This function will enable efficiencies through centralised cross-SRO procurement of shared services and consistency in engagement with both the supply chain markets and with Ofwat.
- Development of a broader technical leadership team to help deliver some of the longer-term benefits from the SRO portfolio, develop the digital strategy and capability across the projects including Digital Twin capability and drive technical consistency, standardisation and quality assurance.

2.8 The mobilisation of the Programme Management Office and all associated ‘client-side’ functions necessary to deliver a ‘mega-project’ the scale of SESRO alongside the other Thames Water SROs has been done (and agreed with RAPID) ahead of Gate 2, in order to ensure the team is fully mobilised and systems established in time to progress Gate 3 work in November 2022.

#### 2.2.2 Cost breakdown for Feasibility Assessment and Concept Design

2.9 The breakdown of spend in this WBS is shown in Table 2.4 below.

Table 2.4: Feasibility Assessment and Concept Design, breakdown of Gate 2 costs

Activity	Spend	% total	Justification or need
<b>Technical studies - carbon</b>	£36,139	3%	Analysis of carbon footprint and future mitigation opportunities to inform risks to targets for net zero carbon emissions
<b>Technical studies - rail</b>	£44,463	4%	To confirm feasibility of rail access for construction materials, to minimise road movements
<b>Technical studies - road / access</b>	£87,513	8%	To confirm junction design / capacity and road diversions to meet stakeholder needs
<b>Technical studies - concept design (incl. intake/offtake, tunnels, embankments, intake pumping and towers)</b>	£235,434	22%	To update scheme to reflect latest constraints and information, to confirm costs, to inform environmental impact appraisal
<b>Technical studies - flood risk</b>	£140,587	13%	To confirm impacts of scheme on groundwater and surface water flood risks to help inform stakeholder concerns
<b>Technical studies - off-site pipelines</b>	£14,609	1%	To confirm need for and feasibility of off-site pipelines to local supply zones and Farmoor

Activity	Spend	% total	Justification or need
			Reservoir for additional resilience and environmental benefits
<b>Technical support - BIM and data mgt.</b>	£49,020	5%	To ensure design data is managed effectively to enable efficient delivery of future design and consenting phases
<b>Technical support - costing and ECI</b>	£19,568	2%	To ensure cost estimates reflect latest design, remain aligned with options within WRMP24 and reflect latest available information <sup>2</sup> .
<b>Technical support - technical management</b>	£202,671	19%	Oversight and management of all design tasks and technical analysis, to ensure delivery to required levels of safety, quality, time and cost
<b>Technical support - dam safety review engineer</b>	£16,320	2%	To ensure all requirements of the Reservoirs Act for this stage are met and proposed Design Safety Panel is scoped for implementation in next phase
<b>Partner company technical guidance</b>	£123,252	12%	Governance and oversight from partner companies to ensure adherence to technical design standards and requirements
<b>Third party costs - Network Rail</b>	£76,335	7%	Funding to enable Network Rail attendance at Technical Liaison Groups and review of technical studies
<b>Remaining Contingency</b>	<b>£5,100</b>	<b>0%</b>	<b>Expected to be removed in final reconciliation</b>
<b>TOTAL</b>	<b>£1,051,011</b>	<b>100%</b>	

### 2.2.3 Cost breakdown for Environmental Assessment

2.10 The breakdown of spend in this WBS is shown in Table 2.5 below.

Table 2.5: Environmental Assessment, breakdown of Gate 2 costs

Activity	Spend	% total	Justification or need
<b>Water Quality Modelling, R. Thames and R. Ock</b>	£263,327	9%	Confirm impacts on River Thames and Ock, create models for future EIA
<b>Reservoir Modelling, computational fluid dynamics and Protech</b>	£206,283	7%	Analyse temperature and mixing conditions in reservoir; provide data for algal bloom analysis

<sup>2</sup> Note: there has been limited input from contractors during this phase, with focus on early contractor involvement (ECI) planned for next phase of works

Activity	Spend	% total	Justification or need
<b>Aquatic ecological studies</b>	£106,209	4%	Confirm algal bloom risk under drought operational conditions
<b>WFD assessment</b>	£203,046	7%	Confirm compliance with WFD
<b>Hydrological and geomorphological studies</b>	£247,795	9%	Detailed analysis of sensitive receptors, inform WFD assessment
<b>INNS risk assessment</b>	£28,417	1%	Confirm INNS risk and mitigation
<b>Initial micro-climate impacts study</b>	£15,810	1%	Initial view of local impacts, to inform future detailed modelling studies (EIA)
<b>Water quality risk assessment</b>	£30,381	1%	Drinking water risk analysis
<b>Heritage assessment</b>	£19,240	1%	Initial review of impacts and enable engagement with OCC and plan future studies for EIA
<b>Landscape assessment</b>	£65,532	2%	Initial review of impacts, enable engagement with OCC and VoWH; inform initial landscape design and embankment mitigation plans
<b>Other desk-based assessments (soils, noise)</b>	£86,382	3%	Initial review of impacts and plan future studies for EIA
<b>Terrestrial biodiversity studies and BNG assessment</b>	£79,454	3%	Confirm initial BNG calculations and inform landscape Master Plan; define future survey requirements
<b>Conservation, access and recreation strategy</b>	£19,760	1%	Define potential options / opportunities for site recreational use and inform future consultation
<b>Update initial HRA</b>	£15,378	1%	Confirm HRA as update to Gate 1 assessment
<b>Update SEA analysis for WRMP24 and WRSE</b>	£10,491	0%	Confirm scheme strategic impacts, to ensure alignment with environmental metrics used by WRSE and WRMP24; in-combination assessment
<b>Benefits study and NCA</b>	£34,446	1%	Natural capital appraisal and wider benefits assessment
<b>Reservoir visualisation</b>	£76,812	3%	To engage stakeholders and provide information on scheme visual impacts
<b>River Thames licensing strategy</b>	£119,345	4%	To identify, quantify and analyse environmental licences (abstraction, discharge, transfer) required from EA to deliver scheme
<b>Technical management, oversight and coordination</b>	£239,311	9%	Oversight and management of all design tasks and technical analysis, to

Activity	Spend	% total	Justification or need
			ensure delivery to required levels of safety, quality, time and cost
<b>Third party costs - EA</b>	£793,884	29%	Funding to enable EA / NAU attendance at Technical Liaison Groups and review of technical studies
<b>Third party costs - NE</b>	£70,122	3%	Funding to enable NE attendance at Technical Liaison Groups and review of technical studies
<i>Remaining Contingency</i>	<i>£49,839</i>	<i>2%</i>	<i>Expected to be removed in final reconciliation</i>
<b>TOTAL</b>	<b>£2,781,265</b>	<b>100%</b>	

#### 2.2.4 Cost breakdown for Procurement Strategy

2.10 The breakdown of spend in this WBS is shown in Table 2.6Table 2.5 below.

Table 2.6: Procurement Strategy, breakdown of Gate 2 costs

Activity	Spend	% total	Justification or need
<b>Procurement and commercial options study</b>	£142,929	28%	Appraisal of procurement options to feed into Gate 2 report. Required by RAPID guidance.
<b>Partner company technical guidance</b>	£142,643	28%	Oversight and company ownership of procurement and commercial analysis
<b>Establishment of PMO commercial support</b>	£218,994	43%	Mobilisation of commercial support, which will ensure commercial risk is managed effectively after Gate 2
<i>Remaining Contingency</i>	<i>£1,171</i>	<i>0%</i>	<i>Expected to be removed in final reconciliation</i>
<b>TOTAL</b>	<b>£505,736</b>	<b>100%</b>	

#### 2.3 Efficiency of Gate 2 spend

2.11 The efficiency of the spend to Gate 2 has been assured through the application of a series of control mechanisms throughout the procurement, delivery and reporting of the required technical services. These control mechanisms include:

- The approach(es) taken to procurement – both in terms of how we specified work and how we procured it between the project partners
- Cross-SRO working and integration with WRSE regional modelling
- Control and governance of change

2.12 Efficiency to Gate 2 has been derived using the following specific approaches:

- The work undertaken is aligned to RAPID's requirements. Only work packages and scope that is directly required to deliver the Gate 2 submission or to avoid programme risks for Gate 3 have been applied. This results in a very targeted scope of work.
- Shared methodologies continued to be developed for Gate 2, across numerous SROs. Shared methodology and application reduces technical work effort (standard approaches, templates, outputs etc); no need to assure bespoke methodologies across all SROs, driving consistency with other SROs for Gate 2 submission. For Gate 2, good examples include a study into generic decarbonisation opportunities across SROs, aligned and consistency approaches to options appraisal, a standard methodology for in-combination environmental assessment for the SEA work package, a benefits assessment methodology common across SESRO and T2AT, common water quality modelling methodology and approach across all River Thames SROs and common use of the WRSE Regional System Simulation (RSS) model for Deployable Output analysis across Thames SROs.
- Integrated use of the WRSE modelling team and models. The WRSE Investment Model has been used to help explore the sensitivity of the need and timing of this specific SRO. Use of WRSE data and models helps reduce technical work effort and time required to assess options for Gate 2.
- Implementation of common procurement principles. Standardised rules for the procurement of services on behalf of multiple project partners has helped to provide best value for money. This has been delivered through the continued application of the Gate 1 prioritised hierarchy of standard procurement approaches, helping to drive competition and efficiency into external procurement by whichever project partner was best placed to procure each work package. This also allows shared governance over the procurement of technical services across the project partners, which drives accountable efficiency into the process.
- Use of competitive procurement and qualitative benchmarking. Many of the key external support services has been procured using competitive approaches, with the majority going via framework mini-bid processes. Where direct award was used, for example due to the highly specialised nature of the work required, qualitative benchmarking and challenge using professional judgement against similar previous work packages ensured efficiency.
- Procurement of work packages across multiple SROs. Several work packages have been procured on behalf of multiple SROs, to drive efficiency into both procurement and delivery (economies of scale for contractors, fewer contracts to let and manage and fewer consultancy interfaces). Examples include environmental and water quality surveys, water quality modelling, algal experimentation, River Thames licensing strategy, commercial and procurement support and 2<sup>nd</sup> line technical assurance for environmental deliverables, which were procured across multiple SROs. Work packages for Project Management, Planning and land strategy and 3<sup>rd</sup> line external assurance were procured centrally for SESRO and T2AT combined.

- Rigorous application of Project Management controls. Robust control implemented by the Project Manager and overseen by the Programme Management Board (PMB) helps prevent ‘scope creep’ and cost escalation. All contract extensions were approved by PMB prior to implementation. This has been particularly required on the larger and more complex work packages, where the scope is often ‘emergent’ as work is undertaken and hence the risk of scope creep is greatest.

2.13 These efficiency measures are mapped to the principal work packages procured for Gate 2 in Table 2.7 below.

Table 2.7: Mapping of Efficiency initiatives to Gate 2 Work Packages

Key work package	Scope aligned to Gate 2 needs	Shared methodologies	Integrated with WRSE	Common procurement principles	Competitive procurement	Qualitative benchmarking	Multi-SRO procurement	Robust change control
WP1 – water quality modelling	✓	✓		✓	✓		✓	✓
WP2 – algal experiments	✓			✓		✓	✓	
WP2 – CFD and algal modelling	✓			✓		✓		✓
WP3 – ecological monitoring	✓	✓		✓	✓		✓	
WP4 – water quality monitoring	✓	✓		✓	✓		✓	
WP5 – engineering support	✓	✓		✓		✓		✓
WP8 – water resources modelling	✓	✓	✓	✓		✓	✓	✓
WP9 – planning and land strategy	✓			✓		✓	✓	
WP10 – project management	✓			✓		✓	✓	
WP11 – customer research / engagement	✓	✓	✓	✓	✓		✓	
WP12 – aquatic environmental support	✓			✓		✓	✓	✓
WP13 – terrestrial environmental support	✓	✓	✓	✓	✓			✓
WP15 – visualisation modelling	✓			✓		✓		
WP16 – River Thames licensing strategy	✓	✓		✓	✓		✓	
WP17 – commercial and procurement	✓			✓	✓		✓	
WP18 – legal support	✓			✓	✓		✓	
WP19 – external Board assurance	✓			✓	✓		✓	

Key work package	Scope aligned to Gate 2 needs	Shared methodologies	Integrated with WRSE	Common procurement principles	Competitive procurement	Qualitative benchmarking	Multi-SRO procurement	Robust change control
WP20 – hydrological analysis R. Thames	✓			✓		✓		
WP21 – water resources modelling (WRSE)	✓		✓	✓		✓	✓	
WP22 – external technical assurance	✓			✓	✓		✓	
WP23 – Dam safety review panel support	✓			✓		✓		
External stakeholder costs – OCC, Network Rail, NAU, NE, VoWH	✓			✓		✓	✓	

### 2.3.1 Procurement Efficiency

2.14 We have applied three key principles to ensure efficient procurement of the support services required for the Gate 1 submission:

- Agreement of a standardised procurement process across SROs, to help drive efficiency;
- Application of competitive procurement approaches, wherever possible, to help drive competition into the procurement of support services and ensure efficiency of total spend;
- Procurement across SROs, for aligned work packages, to help drive efficiency across common tasks.

2.15 The common procurement principles developed for Gate 1 were applied for this latest phase of the SRO project, to create efficiency in factors such as the development of procurement documents of technical specifications, approval and assessment of tenders.

2.16 In accordance with these guidelines, where possible, competitive procurement approaches have been adopted to ensure best value for money across the workstreams. Due to timescale constraints, formal OJEU or subsequent UK e-notification procurement on behalf of partner companies was not possible in most instances, but mini-tender on existing company frameworks have been utilised where possible. The key external support work packages procured for this SRO,

and the procurement approach followed, are detailed in Table 2.8 below. The purchasing partner was selected on the basis of which organisation was best placed to most competitively procure the required work.

- 2.17 As far as practical and efficient to do so, procurement activity has sought to distribute evenly the value of packages between the partner companies to maintain a broadly equal spend profile at the end of each gate. However, it has also been acknowledged that other factors needed to be considered in selecting a company framework such as number and capability of suppliers.

*Table 2.8: Procurement approach followed for technical workstreams*

Work package ref.	Purchasing partner	Procurement approach followed	Comments
<b>WP1 – water quality modelling</b>	Thames Water	Competitive mini-tender under existing TW f/w (FA1300, Lot 1)	Work procured on behalf of all Thames SROs to help drive efficiency in delivery and reporting.
<b>WP2 – algal experiments</b>	Thames Water	Direct award to specialist supplier, limited available competition due to the highly specialised nature of the work.	Work procured on behalf of all Thames SROs to help drive efficiency in delivery and reporting.
<b>WP2 – CFD and algal modelling</b>	Thames Water	Direct award to specialist supplier, limited available competition due to the highly specialised nature of the work.	Retained supplier from Gate 1 for technical continuity
<b>WP3 – ecological monitoring</b>	Thames Water	Direct award to existing framework supplier (FA1300, Lot 3), hence staff rates used had previously been through a competitive tender process to win place on framework. Efficient procurement across multiple SROs covering wide survey area (Severn, Thames and Lea Valley) to benefit multiple projects.	Desire to achieve technical continuity and efficiency with Gate 1 team (maintain consistency in survey locations, methodologies and permissions)
<b>WP4 – water quality monitoring</b>	Thames Water		
<b>WP5 – engineering support</b>	Thames Water	Direct award to existing framework supplier (FA1300, Lot 3), hence staff rates used had previously been through a competitive tender process to win place on framework.	Desire to achieve technical continuity and efficiency with Gate 1 team, reduce downtime for mobilisation of new supplier and retain knowledge
<b>WP8 – water resources modelling</b>	Thames Water	Direct award to existing framework supplier (FA1300, Lot 3), hence staff rates used had previously been through a competitive tender process to win place on framework.	Desire to achieve technical continuity and efficiency with Gate 1 (and WRSE) modelling team; highly specialised services
<b>WP9 – planning and land strategy</b>	Thames Water	Direct award to existing framework supplier (Providers of Planning Studies Services & planning reports for Major Projects f/w), hence staff rates used had	Desire to achieve technical continuity and efficiency with Gate 1 advisory team and familiarity with previous land

Work package ref.	Purchasing partner	Procurement approach followed	Comments
		previously been through a competitive tender process to win place on framework.	referencing and compensation analysis
<b>WP10 – project management</b>	Affinity Water	Extension to Gate 1 competitive mini-tender process via existing professional services framework. Procurement of single Programme Manager across multiple SROs (SESRO and T2AT) to ensure efficient delivery.	Need to engage Assistant PM for Gate 2 works, to ensure coordination across both SESRO and T2AT, but <2 FTE total to ensure efficient delivery
<b>WP11 – customer research / engagement</b>	Affinity Water	Competitive tender, 4 tenderers; Procurement on behalf of all WRSE Companies to ensure consistency and efficiency in delivery of work package	Costs subsequently assigned pro-rata across all WRSE Companies and associated SROs
<b>WP12 – aquatic environmental support</b>	Thames Water	Direct award to existing framework supplier (FA1300, Lot 3), hence staff rates used had previously been through a competitive tender process to win place on framework.	Desire to achieve technical continuity and efficiency with Gate 1 team, reduce downtime for mobilisation of new supplier and retain knowledge; services procured across SESRO and T2AT services to gain efficiency in delivery
<b>WP13 – terrestrial environmental support</b>	Thames Water	Competitive mini-tender under existing TW f/w (FA1300, Lot 3), 3 tenderers.	
<b>WP15 – visualisation modelling</b>	Thames Water	Direct award to specialist supplier, limited available competition due to the highly specialised nature of the work.	Retained supplier from Gate 1 for technical continuity and to retain use of existing model to avoid abortive Gate 1 work
<b>WP16 – River Thames licensing strategy</b>	Thames Water	Competitive mini-tender under existing TW f/w (FA1300, Lot 3)	Work procured on behalf of all Thames SROs to help drive efficiency in delivery and reporting.
<b>WP17 – commercial and procurement</b>	Thames Water	Competitive mini-tender under existing TW f/w (FA1300, Lot 1), 2 tenderers	Work procured on behalf of 3 No. Thames SROs to help drive efficiency in delivery and reporting.
<b>WP18 – legal support</b>	Thames Water	Competitive tender to appoint Combined External Legal Team (CELT) across Thames Water; work packages direct awarded under this f/w	CELT deliver work packages on a 'best person for the job' to ensure quality of product; work packages generally let across multiple SROs
<b>WP19 – external Board assurance</b>	Thames Water	Competitive mini-tender under existing TW f/w (FA1300, Lot 1), 5 tenderers	Work procured jointly on behalf of SESRO and T2AT, to help drive efficiency in delivery and reporting.

Work package ref.	Purchasing partner	Procurement approach followed	Comments
<b>WP20 – hydrological analysis R. Thames</b>	Thames Water	Direct award to specialist supplier, limited available competition due to the highly specialised nature of the work.	Retained supplier from Gate 1 for technical continuity and efficiency and to retain use of existing model(s) to avoid abortive Gate 1 work
<b>WP21 – water resources modelling (WRSE)</b>	Thames Water	Direct award to specialist supplier(s), limited available competition due to the highly specialised nature of the work. Appointment of technical specialist to oversee work undertaken as direct award under existing TW f/w (FA1300, Lot 3) to ensure competitively tendered rates	Retained supplier from Gate 1 and WRSE previous modelling work for technical continuity and to retain use of existing model(s)
<b>WP22 – external technical assurance</b>	Thames Water	Competitive mini-tender under existing TW f/w (FA1300, Lots 1 and 3)	Work procured jointly on behalf of SESRO, T2AT, T2ST and London Reuse, to help drive efficiency in delivery and reporting.
<b>WP23 – Dam safety review panel support</b>	Thames Water	Direct award to specialist supplier, limited available competition due to the highly specialised nature of the work.	New supplier but highly specialised work hence needed carefully selected individual

2.18 As noted previously, a number of these work packages have been procured on behalf of multiple SROs, to drive efficiency into both the procurement process (fewer contracts to let and manage) and also into the management and delivery of the associated services (fewer consultancy interfaces). This has included:

- Environmental and water quality surveys and water quality modelling, with resultant savings on programme management, survey logistics, technical oversight, liaison with regulators and reporting.
- Programme Management, with resultant efficiency saving on aspects such as PMB reporting, meetings, team management, cost reporting and schedule management.
- Planning and land strategy, with resultant efficiency savings on reporting and project management.
- Assurance, with resultant efficiency savings on reporting and project management.
- External legal advice, with resultant efficiency savings on workshops and reporting.
- Commercial strategy, with resultant efficiency savings on workshops, management, coordination and consistency between partners and reporting.

### 3. Proposed cost forecast for Gate 3

- 3.1 The forecast costs for Gate 3 are based upon a thorough appraisal of the work breakdown structure for Phase 3 of the project. The project costs are based upon a combination of benchmarking to similar work undertaken during previous phases and expert judgement. Input has been sought from the supply chain on the estimated costs of the main technical work packages, but the costs are not, at this stage, based upon detailed supplier proposals or the outcome of a tender process.
- 3.2 The forecast should therefore be treated as an estimate. It will be reviewed and refined on a monthly basis, throughout Gate 3, as work package scope and costs are agreed with suppliers. Governance by the PMB will ensure adherence to RAPID Final Determination allowances.
- 3.3 The Gate 3 costs are based upon an assumption that the formal partnering arrangements remain as they are for Gate 2. In light of the outcome of the draft WRSE and WRMPs, which allow for a sharing of the resource from SESRO between Thames Water, Affinity Water and Southern Water, discussions are ongoing as to the role that Southern Water might take in the future phases of project delivery as either a stakeholder or a formal sponsor for the project. If funding changes are required before Gate 3, then this will be discussed and agreed with RAPID.
- 3.4 The forecast Gate 3 costs are shown in Table 3.1 below, inclusive of estimates for risk and contingency, categorised in accordance with the Gate 2 cost breakdown for consistency and aligned to the scope of work detailed in Supporting Document F-1: Project Delivery Plan.

Table 3.1: Gate 3 Forecast Costs (estimated at Gate 2 and subject to change)

Category	Expected Activity Summary	Expenditure (£, 17-18 prices)	% of Total Expenditure
Programme & Project Management	Project management; governance, direction and guidance from within partner companies; procurement support; Assurance	6,323,107	15%
Feasibility Assessment and Concept Design	Further options appraisal for key residual uncertainties (access, recreational use, additional benefits); Ongoing design development; Development of initial Design and Access Statement; Dam Safety Review panel	8,648,400	21%
Option benefits development and appraisal	Cost benefit appraisal for full scheme; cost-benefit analysis on key options / decisions; revised water resource modelling / sensitivity	1,351,367	3%

Category	Expected Activity Summary	Expenditure (£, 17-18 prices)	% of Total Expenditure
Environmental Assessment	Specify baseline survey; Modelling studies; EIA Scoping; Inputs into options appraisal; inputs into consultations	4,177,161	10%
Data Collection, Sampling, and Pilot Trials	Extension of G2 monitoring on R.Thames; R.Ock baseline environmental survey(s); site / ground surveys including boreholes	8,690,400	21%
Procurement Strategy	Documents, modelling and analysis required for Ofwat DPC control points B and C; engagement with Ofwat	5,060,502	12%
Planning Strategy	Survey planning permissions; ongoing engagement with PINS; land access oversight; landowner negotiations	2,234,913	5%
Stakeholder Engagement	Costs for non-stat. engagements; ongoing technical engagement with regulators *	3,808,771	9%
Legal	Review of Gate 3 documents; survey licences; legal counsel	1,357,875	3%
Other		0	0%
<b>Total</b>		<b>41,652,497</b>	<b>100%</b>
<b>Gate 3 Allowance</b>		42,595,000	-
<b>Forecast Gate Underspend</b>		<b>942,503</b>	<b>2%</b>

\* Note funding for regulators, to enable pre-application engagement, is costed within the relevant technical workstream

**Affinity Water** 

