



**Affinity Water**  
Taking care of your water

# T2AT

Supporting Document F-1: Project Delivery Plan

## 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.

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## 1. Introduction

### 1.1 Context and Purpose of document

1.1 The Gate 2 submission for T2AT consists of a wide range of technical supporting documents, in order 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-1, the Scheme Delivery Plan.

1.3 It provides an overview of the proposed indicative programme, associated scope of work and costs and an assessment of the key delivery risks. 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 explores the details of the scope of work that is required to deliver the future project, focusing on the next stage of work (i.e. to RAPID Gate 3) in detail and proposed timing of the next RAPID governance Gates.
- Section 3 provides an overview of the programme schedule from RAPID Gate 2 until scheme commissioning, detailing the key assumptions and dependencies that have helped develop this and the key risks that are considered.
- Section 4 outlines the key programme level risks that have been identified, along with the proposed mitigation for each and the residual consequence and likelihood of each.

1.5 Further to an option appraisal and refinement process, detailed in Section 3.2 of the main Gate 2 report for Thames to Affinity Transfer (T2AT), two options have been selected for development to Gate 2, namely the Lower Thames Reservoir (LTR) option and the Beckton Reuse Indirect (BRI) option.

1.6 The two options differ in terms of dependencies, and constraints affecting the programme, scope elements and consent process. Therefore where appropriate, details will be provided for both options.

1.7 As noted in Section 7.1 of the main Gate 2 report, we are not proposing any further work or cost associated with the BRI solution after Gate 2. On this basis, the proposed future programme, scope of work and risks beyond Gate 2 are discussed for the T2AT LTR option only.

## 2. LTR Scope Breakdown

### 2.1 Overview

2.1 This section of the report provides details of the scope of work that is required to deliver the future phases of the project. This scope will, however, be subject to change as the project progresses and the exact requirements of the technical studies changes in response to consultation, regulator feedback and / or survey outcomes.

2.2 The breakdown of future work is aligned with a phasing of the future project around key regulatory and consenting milestones. Suggested timings (and rationale) for future RAPID gateways are also provided, aligned with the programme Gantt chart shown in Section 3.

2.3 An overview of the key tasks and objectives of all future phases is set out, from RAPID Gate 2 through to project commissioning. However, the detailed work breakdown structure is only provided for the next stage of work, i.e. to RAPID Gate 3, as the exact scope of subsequent phases is uncertain and depends on the outcome of key activities within the next phase of work.

### 2.2 Phasing of future work

2.4 The project is conceptualised into a series of future phases of work, in accordance with the schedule presented in Section 3. These are illustrated on a timeline in **Error! Reference source not found.** and the outcomes to be achieved by each phase defined in Table 2.1 below. Phase 1 was completed in July 2021 and Phase 2 is expected to complete in November 2022, with the submission of this Gate 2 document suite to RAPID.

Table 2.1: Phases of future project delivery

Phase	Name	Outcome required
1	Gate 1	RAPID Gate 1 submission
2	Gate 2	RAPID Gate 2 submission
3	Gate 3	<ul style="list-style-type: none"><li>• RAPID Gate 3 submission</li><li>• PINS provide EIA Scoping Opinion</li><li>• Undertake initial non-statutory engagement(s) on the DCO project</li><li>• Ofwat Control Points B and C (for Direct Procurement for Customers, DPC) approved</li></ul>
4	Gate 4	<ul style="list-style-type: none"><li>• RAPID Gate 4 submission</li><li>• Complete Preliminary Environmental Information Report (PEIR)</li><li>• Complete Statutory Public Consultation on the DCO project</li><li>• Ofwat Control Points D and E (for DPC) approved</li></ul>
5	DCO submission and approval	<ul style="list-style-type: none"><li>• Partner company approval to submit DCO application</li><li>• Secretary of State's award of DCO</li></ul>
6	Contract award	<ul style="list-style-type: none"><li>• Ofwat Control Point F (for DPC) approved</li><li>• CAP awarded contract for delivery</li><li>• Land acquisition contracts completed</li></ul>
7	Construction	Scheme commissioned and operational

- 2.5 The LTR option will require an additional scheme, a new source of water, in order to be developed. The source would be either SESRO or the STT SRO. The current timing of the need for the option, as defined by the WRSE draft Regional Plan, means that a deferral period is required for the LTR programme. This deferral prevents inefficient or abortive work from being done until the outcome of the consenting process for the new source of water has been granted, whether this is from SESRO or from another source in the River Thames catchment.
- 2.6 The T2AT LTR option needs to deliver water by 2040, meaning that the scheme only needs to be consented by approximately 2033 and mobilised to site by 2035. The consenting does need to be linked to the consenting process for the ultimate source, either SESRO or another resource in the upper Thames catchment, which is not expected to be resolved until 2028. Also, baseline data collected for the EIA will need to be coincident with the DCO application, hence environmental baseline data collection will need to take place after 2028/29. Therefore, the programme for this scheme shows a deferral period until approximately 2028, to enable the consenting for the new source of water to progress first. This scheme would be taken forwards under the T2AT SRO project.
- 2.7 Therefore, to ensure an efficient delivery and a robust submission, we are proposing to defer the LTR option for a period of 3 - 4 years whilst the consent for the source of water progresses. We are proposing two Checkpoints to help manage this deferral:
- Gate 3 Checkpoint 1, which would be after the next phase of targeted design development and de-risking studies. This is currently expected in mid 2024.
  - Gate 3 Checkpoint 2, which would signify the re-start to the project informed by three key drivers – the development of the draft WRMP29 (confirming the need and timing of the scheme), the approval of the DCO or other consent for the new resources in the upper Thames catchment and a review of the project delivery programme for the T2AT solution, to confirm when work needs to re-start. This is currently expected to be in early 2028. This will be kept under review, as part of the WRMP annual review cycle, enabling acceleration of Checkpoint 2 should it be required, for whatever reason.

### 2.3 [Overview of key aspects and content of future phases of work](#)

- 2.8 The breakdown of the project into a series of future phases enables us to plan and to develop the scope for the next phase in detail, whilst also keeping in mind the preparation or activity that might be required to facilitate subsequent phases. This continual ‘horizon scanning’ approach enables us to keep the risk register up-to-

date and to adjust our activities as required to help optimise delivery in response to external factors.

### 2.3.1 Gate 3, proposed objectives and timeline

2.9 As noted in Table 2.1 above, there are several key outcomes that we would propose to achieve by Gate 3. These are intended to ensure key initial decision points by the principal regulators and consenting authorities have been passed, thereby ensuring that the scheme is more clearly defined with a greater level of confidence in the residual issues to be resolved during subsequent stages. These initial decision points include:

- A Scoping Opinion under the Environmental Impact Assessment Regulations, provided by the Planning Inspectorate. This will define the scope, methodology and timeline for the subsequent Environmental Impact Assessment.
- The initial non-statutory engagement(s) will have been completed, in order to confirm the balance of public opinion on the scheme. This will help inform the residual design and environmental mitigation issues that require further consideration and development.
- Ofwat will have approved Control Points B and C, under their standard DPC approval process. This will ensure that the initial Value for Money assessment, Procurement Plan and the Statement of Case have been approved.

2.10 The need to defer the scheme drives a different set of outcomes and objectives for the next stage of work. The same objectives would apply to Gate 3 in due course, but for the proposed Gate 3 Checkpoint 1 in 2024, a different set of (interim) outcomes are proposed, as follows:

- Increased confidence sufficient to confirm an initial preferred scheme, based upon further appraisal of critical choices and collection of initial site-based data (land access allowing).
- If possible, alongside the consultation on WRMP24, initial informal non-statutory engagement will ideally have been undertaken, to provide increased confidence in stakeholders' reactions to and position on the options studies and initial preferred scheme. This aspect is not critical, as engagement will be required when the project is re-started after Gate 3 Checkpoint 2.
- Initial contact and negotiations will have been held with critical landowners affected by the scheme, particularly those at the permanent sites and at critical pipeline pinch-points, and (if possible) sites and routes will be safeguarded within Local Plans.
- Initial value for money assessment will have been completed, sufficient to confirm the draft procurement strategy for the scheme and agreement in principle with Ofwat (but not necessarily formal DPC control point submissions).

### 2.3.2 Gate 3, proposed work breakdown structure

- 2.9 In order to deliver these outcomes, we are proposing work across a number of technical workstreams. The key activities that are currently envisaged for the next stage of work are shown in Table 2.2 below, with more detail of expectations for future phases included in Appendix A. The detailed activity for future phases will be developed at each subsequent Gate. These proposed activities are indicative only, and subject to change as the scope of required work is clarified during subsequent stages.
- 2.10 For the T2AT LTR option, because of the necessary deferral we are not proposing a Gate 3 submission until 2029. However, to ensure a suitable ‘checkpoint’ before the deferral of the scheme, we are proposing a reporting checkpoint to RAPID in mid 2024, after which work on this SRO will be deferred. We refer to this as a “Gate 3 Checkpoint 1”.
- 2.11 This approach is based upon commencing further feasibility studies and investigations to de-risk future delivery, as would be the case for all SROs after Gate 2, but only to address areas of critical uncertainty with the scheme rather than delivering all of the required Gate 3 outcomes. Consequently, the duration and scope of this work will be less than a standard Gate 3 process. This checkpoint would update and reflect any material changes that will have occurred since Gate 2. It will not be a detailed or extensive document submission. It is simply intended to be a ‘checkpoint’ to enable the scheme to be confidently parked until later remobilisation.
- 2.12 Some targeted survey work or technical feasibility studies could continue after the Gate 3 Checkpoint 1, if required to further reduce future delivery risk. However, the scope of these is currently uncertain and would be agreed with RAPID at Gate 3 Checkpoint 1, should they be required.
- 2.13 For LTR option, the formal Gate 3 submission would take place once the scheme has remobilised in AMP8, following completion of the consenting process for either SESRO or the STT. The exact scope of work to be undertaken once the scheme is re-mobilised would be agreed with RAPID at Gate 3 Checkpoint 2, once the need and timing of the scheme has been reconfirmed. We note that this places Gates 3 and 4 within AMP8 (after 1st April 2025) and would seek to discuss with RAPID the regulatory and funding arrangements that may need to be associated with this extension of the development timescales.

Table 2.2: Indicative, planned activities within Phase 3

Phase	Timing *	Key activities	Key decision(s)
3	Nov 2022 – June 2024	<ul style="list-style-type: none"> <li>• Alignment of scheme need, timing and scale to Final WRMP24</li> <li>• Commence initial targeted environmental and engineering baseline data collection and survey</li> <li>• Ongoing liaison and negotiation with affected landowners</li> <li>• Undertake options technical appraisal for key aspects of the project and include in non-statutory engagement(s)</li> <li>• Undertake Non-statutory engagement(s) on options (if possible alongside consultations on WRMP24)</li> <li>• Draft Value for Money assessment and initial procurement plan</li> <li>• Further design refinement and development of initial preferred scheme to reflect survey data collection and stakeholder feedback at consultation</li> <li>• Update to RAPID for Gate 3 Checkpoint 1</li> </ul>	<ul style="list-style-type: none"> <li>• RAPID Gate 3 Checkpoint 1</li> </ul>

## 2.4 Work Breakdown Structure to Gate 3 Checkpoint 1

2.14 A detailed work breakdown structure (WBS) has been developed for the programme to the Gate 3 Checkpoint in accordance with the overview discussed previously. This WBS is then used to derive the programme shown in Section 3 and the estimated cost profile, as shown in Supporting Document F-2: Efficiency of Spend. The scope for proposed future surveys and technical appraisal will be confirmed to RAPID at Gate 3 Checkpoint 1.

2.15 The WBS is tabulated in accordance with the spend categories requested by RAPID, with estimated activities against each work category. In Supporting Document F-2: Efficiency of Spend, costs are then be assigned at an activity level. This spend profile forms the baseline for the Gate 3 Checkpoint 1, against which actual spend and progress can be monitored. An overview of the WBS is shown in Table 2.3 below.

Table 2.3: LTR Phase 3 Work Breakdown Structure, up to Gate 3 Checkpoint 1 (indicative of tasks currently planned, but may be subject to change)

RAPID work category	Specified activities
<b>Programme &amp; Project Management</b>	<ul style="list-style-type: none"> <li>▪ Day to day management and coordination, including project controls, programme and cost tracking and project performance reporting and partner company governance and oversight</li> <li>▪ Assurance</li> </ul>

<b>Feasibility Assessment and Concept Design</b>	<ul style="list-style-type: none"> <li>▪ Undertake targeted options technical and cost appraisal to de-risk key aspects of the project to include in non-statutory engagement(s), including pipe route, WTW site, Wraysbury Tunnel connection, intake, pipeline alignment, integration with other structures and SROs</li> <li>▪ Continue development of outline design for key engineering aspects including pipeline, WTW, Wraysbury Tunnel connection, crossings and intake.</li> <li>▪ Further design refinement and development of initial preferred scheme to reflect survey data collection and stakeholder feedback at initial engagement(s)</li> </ul>
<b>Option benefits development and appraisal</b>	<ul style="list-style-type: none"> <li>▪ Review and refine cost-benefit appraisal for scheme selected by draft (or revised draft, if different) WRMP24</li> <li>▪ Further modelling of need and alternatives, as required, using WRSE regional system simulator and investment model, to reflect commentary from public consultations on WRSE and WRMP strategic plans.</li> </ul>
<b>Environmental Assessment</b>	<ul style="list-style-type: none"> <li>▪ Complete remaining options environmental appraisal for key aspects of the project, to integrate with feasibility assessment</li> </ul>
<b>Data Collection, Sampling, and Pilot Trials</b>	<ul style="list-style-type: none"> <li>▪ Subject to land access constraints, commence environmental and engineering baseline data collection and survey, targeting those areas of critical uncertainty or risk with concept design, including: <ul style="list-style-type: none"> <li>○ Walkover surveys</li> <li>○ Ground investigations, if land access available</li> <li>○ Targeted ecological, biodiversity and arboricultural surveys</li> <li>○ Continuation of water quality sampling across River Thames</li> </ul> </li> </ul>
<b>Procurement Strategy</b>	<ul style="list-style-type: none"> <li>▪ Undertake initial work to develop initial document suite required for Ofwat Control Point B and development of initial ‘Heads of Terms’</li> <li>▪ Undertake initial market ‘sounding’ to support Control Point B submission</li> <li>▪ Proactive engagement with Ofwat throughout</li> </ul>
<b>Planning Strategy</b>	<ul style="list-style-type: none"> <li>▪ Proactive engagement with CCs and LPAs throughout; if possible, secure safeguarding for Gate 2 working solution (pipeline route and sites) in Local Plans</li> <li>▪ Secure planning permission, as required, for survey work (e.g. long-term monitoring installations)</li> <li>▪ Overseeing all land access (including communications, negotiations, logistical planning and managing compensation payments) including initial negotiations and discussions with landowners</li> </ul>
<b>Stakeholder Engagement</b>	<ul style="list-style-type: none"> <li>▪ Continue to support public consultations on WRSE and WRMP strategic plans through provision of scheme specific information</li> <li>▪ If possible, integrated with WRMP24, undertake Non-statutory engagement(s) on options and/ or initial scheme</li> <li>▪ Ongoing liaison and negotiation with affected landowners</li> <li>▪ Ongoing liaison with all statutory consultees and regulators via Technical Liaison Groups</li> </ul>
<b>Legal</b>	<ul style="list-style-type: none"> <li>▪ Review of key legal documents and issues, particularly associated with environmental permitting and compliance</li> <li>▪ Land access licences and / or statutory notices, if required</li> <li>▪ Ad hoc support, as required</li> </ul>

## 3. LTR Programme Overview

### 3.1 Introduction

3.1 This section provides an overview of the proposed schedule for the project, from Gate 2 onwards to scheme commissioning.

3.2 At this early stage in the project delivery lifecycle, this schedule has to be relatively high level as the exact make-up and sequencing of activities is uncertain. However, the critical dependencies and assumptions that underpin it are documented. This outline programme has informed the dates when the water is assumed available for the purposes of the WRSE Draft Regional Resilience Plan and Affinity Water's and Thames Water's Draft WRMP24 submissions.

3.3 A number of broad (as yet undefined) risks are also built into the schedule in order to explore the sensitivity of these factors to the final commissioning date.

### 3.2 Key dependencies and assumptions

3.4 The key assumptions and dependencies that apply to the programme are detailed in Table 3.1.

3.5 The water for is needed early in the planning period in 2039/40.

### 3.3 Gantt Chart

3.6 A summary Gantt chart, based upon the scheduling of the required scope of work in accordance with the current dependencies and assumptions, is provided in **Error! Reference source not found.**, to show the complete baseline for the project.

Figure 3.1: Overview of LTR future project phasing (note, excluding risk items)

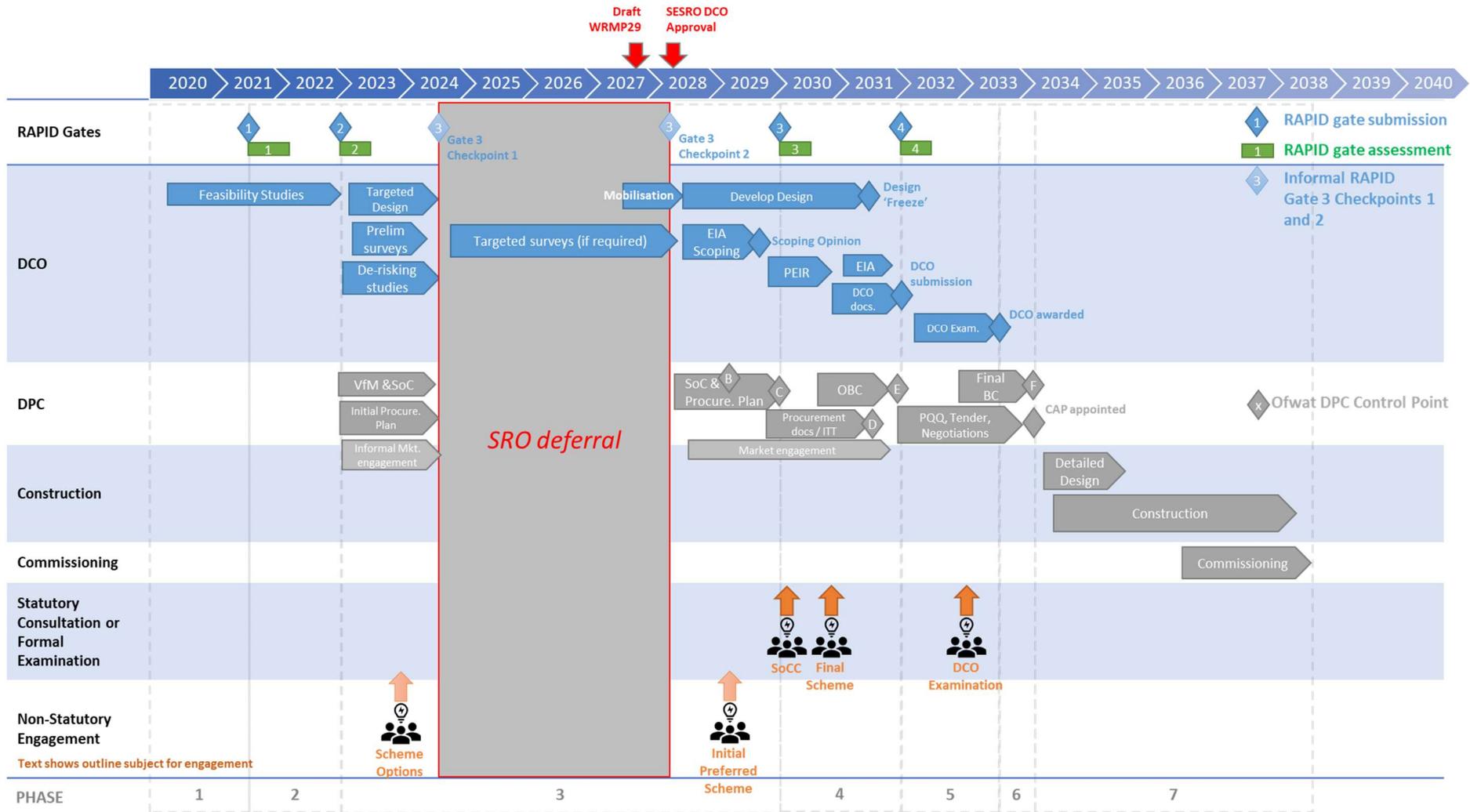


Table 3.1: Summary of LTR key programme dependencies and assumptions

Assumption or Dependency	Source / Rationale	Impact
The consent process for LTR will not start until the scheme to supply a source of water has been granted DCO consent.	The LTR option is dependent on the consenting of a new source of water in the Thames catchment. It requires an additional scheme to be consented before it can proceed.	The scheme will be archived during a deferral period. Remobilisation and an informal stakeholder engagement on the preferred route/sites will need to be repeated post deferral due to the likely length of deferral (3 – 4 years). The DCO statutory consultation is unlikely to start until summer 2030.
No statutory powers of land access will be applied for survey work until after revised draft (rd)WRMP24 has been issued to Defra	To ensure that consultation on WRMP24 is completed and corporate sponsorship of scheme exists before landowners are subjected to such statutory powers	Summer 2023 will be first full survey season available, but there is a risk that full survey baseline not possible in this first year. This is not considered critical for T2AT in light of proposed deferral period.
Access for survey work to some areas of the land required for the working solution, will require use of legal powers <sup>1</sup>	Large areas of the land required for the working solution are currently in third party ownership and access may not be granted through informal agreement	Full baseline survey coverage and ground investigations in spring & summer 2023 may not be possible / achievable, with 2024 being first year of full survey
It is assumed that the scheme will be EIA development, subject to confirmation by PINS	EIA Regulations <sup>2</sup> , Schedule 2	Lengthy period required for baseline data collection and impact assessment
Baseline data used for scheme EIA needs to be up-to-date at time of DCO submission	EIA Regulations <sup>4</sup>	Baseline data used to inform the EIA should be collected in the 2 – 3 years prior to the DCO submission. Hence, if DCO submission has to be deferred to await the outcome of another consenting process, as for LTR, then the

<sup>1</sup> under s172 Housing and Planning Act, 2016 - [Housing and Planning Act 2016 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2016/22/section/172)

<sup>2</sup> [The Town and Country Planning \(Environmental Impact Assessment\) Regulations 2017 \(legislation.gov.uk\)](https://www.legislation.gov.uk/uksi/2017/1003/section/2)

Assumption or Dependency	Source / Rationale	Impact
		subsequent collection of EIA baseline data also needs to be deferred. Hence, EIA baseline data collection planned 2029 – 2031.
Currently 2 informal engagements and 1 formal statutory public consultation are envisaged prior to the submission of the DCO application, but this may be subject to change as required by consultation on WRMP24 or other factors.	To ensure local communities and stakeholders have opportunity to comment on and influence the development of the T2AT scheme	Design iteration stages to follow each consultation.
Submission and publication of an EIA Scoping Report will be subsequent to the final informal engagement (on the initial preferred scheme)	To ensure that local communities and stakeholders have opportunity to comment on and influence the development of the T2AT scheme prior to submission of Scoping Report to PINS	EIA Scoping Report submission to PINS in mid 2024 for BRI and mid 2029 for LTR
Statutory consultation on DCO should post-date direction from Secretary of State (Defra) to publish Final WRMP24; timing of this depends on approval of rdWRMP24 by Defra	To ensure that consultation on T2AT is robust and transparent to stakeholders in the context of (and subsequent to) WRMP24	Publication of rdWRMP expected mid 2023 and the final WRMP24 expected early 2024 at the very earliest.
Procurement of scheme is likely to be via DPC	Supporting Document E: Commercial and Procurement Strategy	A standard process with set control points, mandated by Ofwat, needs to be followed
Required abstraction and discharge licences would not be granted via DCO, but via separate subsequent application – but all pertinent issues addressed within DCO Environmental Statement	Environmental permits would not normally be awarded under DCO powers	Risk of non-approval of additional environmental permits and delay, hence all required technical analysis and engagement with regulators to be undertaken prior to DCO submission to minimise risks

### 3.4 Key programme risks

3.7 In line with the recommendations of the Treasury Green Book (supplementary guidance, Optimism Bias<sup>3</sup>), the schedule for a project of the scale and type of T2AT should be adjusted to account for unknown risks in the delivery of future activities. This is not done at an activity level, but assigned to the higher-level programme, to account for unknown risks that have yet to be defined by the project. The recommended allowance for non-standard Civil Engineering activities is in the range of 3 - 25%. To account for such unknown risks at this stage, the schedule is therefore conservatively adjusted to account for such optimism bias using:

- Extension to the duration of time required to obtain DCO approval. This could be driven by either factors such as completeness of environmental baseline or assessment, regulator agreement or the suitability of the pre-application consultation, all of which have the potential to delay DCO submission or the potential for a delay in the granting of a DCO by the Secretary of State, potentially driven by new or unresolved issues emerging.
- An extension to the programme required to achieve Ofwat Control Point F (and hence approval to award a CAP) if additional information or changes are needed as a result of the DCO process.
- Extension to the overall construction and commissioning programme(s), driven by factors such as supply chain issues, potential delays on site, unsuitable weather conditions.

3.8 Overall, the delay risks result in a delay to the programme key dates as follows:

Table 3.2: Summary of LTR changes to key programme dates due to optimism bias delays

Key Date	Baseline date	Estimated revised date (including risk allowance)
<b>DCO awarded</b>	Q2, 2033	Q2, 2034
<b>Start on site</b>	Q2, 2034	Q4, 2035
<b>Construction and commissioning complete</b>	Q3, 2038	Q4, 2040

3.9 A more detailed appraisal of risks and proposed mitigation can be found in Section 4 below. We will continue to actively monitor progress against the key risks and proposed mitigation, in order to try to minimise the risk of these programme delays from manifesting. However, on the basis of the current proposed date for Checkpoint 2 and the risks built into the programme, the scheme is still shown to be delivered when required by 2040.

<sup>3</sup> HM Treasury, 2013, "Green Book supplementary guidance: optimism bias", [Green Book supplementary guidance: optimism bias - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/270422/green-book-supplementary-guidance-optimism-bias.pdf)

## 4. LTR Risk Management

### 4.1 Introduction

4.1 Risk is managed across the programme using two specific tools:

- A programme level risk register has been developed, with the primary focus on programme level delivery and consenting risks inherent through the pre-construction phases of the project.
- A construction phase costed risk register, focused on the quantification and mitigation of cost risks during the future construction of the SRO.

4.2 The programme level risk register enables the development of a coherent and holistic mitigation strategy to address the primary consenting risks, which remain a priority at this stage in the project. These risks are generally hard to quantify in cost and programme terms but, can be categorised and prioritised relative to each other. This register forms the basis of the quarterly reporting that the SRO issues to RAPID and the monthly risk review undertaken by the Programme Management Board.

4.3 This section of the Programme Delivery Plan focuses on the key aspects of the programme level risk register only, discussing the highest priority risks and what activity is being undertaken to mitigate the major cost and programme risks during Phases 2 – 7 of the project. The costed risk register is discussed further in Technical Supporting Document A2, Cost Report.

### 4.2 Programme Level Risk Register

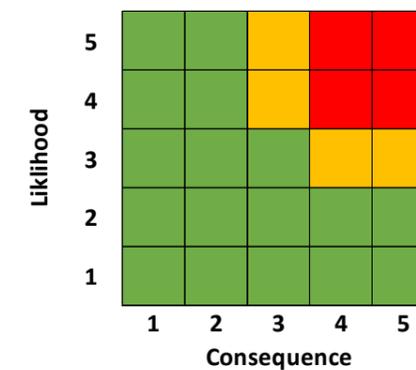
4.4 A summary of the most important risks to the project is shown in Table 4.1. This information is consistent with that shared previously with RAPID.

Table 4.1: Summary of Programme Level Risk Register at Gate 2 (highest risks pre-mitigation only)

Risk Theme	Details	Likelihood	Pre-Mitigation Consequence	Risk	Proposed Mitigation	Likelihood	Post-Mitigation Consequence	Risk
Environment	Abstraction impacts from T2AT might have impacts on fish habitat and migration habits in the affected reaches in the River Thames or Lee.	4	4	High	Ongoing water quality and aquatic ecology monitoring; Hydrological and water quality assessment and modelling;	2	4	Low
Environment	Abstraction activities/licencing will require impact assessment in accordance with EA guidance	4	4	High	Commence licensing / consenting strategy work, including assessment of required abstraction and discharge licences and collaborative review of Lower Thames Operating Agreement (LTOA) in close liaison with the Environment Agency (including joint scoping).	3	4	Medium
Environment	Loss of watercourse habitat and species, hedgerows and terrestrial habitats/impacts on species which provides challenge to achieve 10% Biodiversity Net Gain	4	4	High	Continued ecological survey of River Thames plus initial targeted Phase 1 habitat survey of potential sites and key areas along pipeline corridors	2	4	Low
Land/Planning	Failure to demonstrate a compelling case for the need of compulsory acquisition purposes through a reliable site selection process.	4	5	High	Site and scheme selection will be justified at the scale of the project overall and for the individual acquisition or land rights sought. This work will be supported by the options appraisal undertaken for Gate 2.	2	5	Low
Land/Planning	Failure to secure the Section 35 to treat the project as a NSIP. This may significantly extend the programme due to the large number of third parties involved in TCPA application.	4	4	High	Early engagement with PINS after Gate 2 to try to secure agreement in principle prior to s35 submission. Liaising with stakeholders, including affected LPAs and GLA, to obtain support for s35 direction.	3	4	Medium
Land/Planning	The DCO application is not accepted for examination.	4	5	High	Extensive pre-application consultations will be undertaken to pass the 'adequacy of consultation' test at the DCO acceptance stage. The DCO application will comprise a comprehensive array of documentation produced by experienced practitioners in accordance with relevant regulations including the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.	2	5	Low
Programme	Dependency between Final WRMP24 publication and statutory DCO consultation - Final WRMP24 should be published (or direction to publish received from SoS) before statutory consultation progressed for subsequent DCO.	5	4	High	Mitigated via proactive stakeholder engagement for WRMP24 and close alignment of the scheme need, timing and scale to Regional (WRSE) Plan and WRMP24. Current critical path programme analysis suggests that delay on final WRMP24 to March 2025 will not delay subsequent DCO submission due to proposed deferral.	2	4	Low

\* Assessment of risk in accordance with a standard 5 x 5 matrix of likelihood and consequence (red = high risk, amber = medium risk and green = low risk):  
Score of 1 is lowest for each category. Indicative definitions of likelihood and consequence listed below:

Score	Consequence	Likelihood
1	Negligible impact on project	Unlikely
2	Low or limited impact on project delivery or cost	Possible
3	Medium impact on project delivery or cost	Probable
4	High impact on project delivery or cost	Expected
5	Major impact on project delivery or cost	Definite



## Appendix A      Indicative, planned activities after Gate 3 Checkpoint and proposed deferral period

Phase	Timing *	Indicative planned activities	Key decision(s)
<b>3</b>	2028 – 2029	<ul style="list-style-type: none"> <li>• Repeat Non-statutory engagements, as required, on options and initial preferred scheme</li> <li>• Further design development, as required, to inform EIA Scoping and as informed by engagement and survey work</li> <li>• Develop EIA Scoping Report, submit to PINS and receive formal EIA Scoping Opinion</li> <li>• Ongoing liaison and negotiation with affected landowners</li> <li>• Reassess Value for Money assessment, DPC Statement of Case and Procurement Plan and submit for approval of Ofwat DPC Control Points B and C</li> <li>• Submit update to RAPID for Gate 3</li> </ul>	<ul style="list-style-type: none"> <li>• Source water DCO Approval</li> <li>• PINS EIA Scoping Opinion</li> <li>• RAPID Gate 3 approval</li> <li>• Ofwat Control Points B and C (for DPC)</li> </ul>
<b>4</b>	2029 – 2031	<ul style="list-style-type: none"> <li>• Publication of Final WRMP24 and final alignment of scheme need and timing</li> <li>• Statement of Community Consultation drafted, agreed and published</li> <li>• Further design refinement and development of initial preferred scheme to reflect survey data collection and stakeholder feedback at engagements; Draft outline design, as required for DCO submission</li> <li>• Carry out ongoing baseline data collection and survey</li> <li>• Preliminary Environmental Information Report (PEIR)</li> <li>• Statutory consultation(s) on proposed preferred scheme</li> <li>• Ongoing liaison and negotiation with affected landowners</li> <li>• Development and submission of DPC Procurement documents and Outline Business Case (as required for Ofwat Control Points D and E)</li> <li>• Submit update to RAPID for Gate 4</li> </ul>	<ul style="list-style-type: none"> <li>• RAPID Gate 4 approval<sup>4</sup></li> <li>• Ofwat Control Points D and E (for DPC)</li> </ul>
<b>5</b>	2031 – 2033	<ul style="list-style-type: none"> <li>• Finalise Environmental Statement</li> <li>• Final baseline data collection and survey (if required)</li> <li>• Finalise outline design for planning</li> <li>• Creation of full DCO application document suite</li> <li>• DCO submission to PINS</li> <li>• Notification of application acceptance to stakeholders, affected parties and public</li> <li>• Examination of the application Planning Inspector's report to Secretary of State and Secretary of State's decision</li> </ul>	<ul style="list-style-type: none"> <li>• Partner company approval to submit DCO application</li> <li>• Secretary of State's award of DCO</li> </ul>

<sup>4</sup> subject to agreement of Gate 4 timing and outcomes with RAPID

		<ul style="list-style-type: none"> <li>• Progress PQQ and ITT for procuring the Competitively Appointed Provider (CAP)</li> <li>• Ongoing negotiations with preferred bidder(s)DCO</li> </ul>	
<b>6</b>	2033 – 2034	<ul style="list-style-type: none"> <li>• Secure land control / acquisition</li> <li>• Discharge DCO requirements</li> <li>• Final Business Case submission to Ofwat (as required for Ofwat Control Point F)</li> <li>• Final contract negotiations and CAP award</li> <li>• Detailed design by CAP</li> <li>• Construction lead-in and pre-mobilisation activities</li> </ul>	<ul style="list-style-type: none"> <li>• Ofwat Control Point F (for DPC)</li> <li>• Contract award for delivery</li> <li>• Land acquisition contracts</li> </ul>
<b>7</b>	2034 onwards	<ul style="list-style-type: none"> <li>• Construction and Commissioning</li> </ul>	<ul style="list-style-type: none"> <li>• Final system testing</li> <li>• Handover</li> </ul>

**Affinity Water** 

