

## **South Lincolnshire Reservoir and Anglian to Affinity Transfer**

### **Proposed Scope Changes to SROs at gate two**

**Supporting note to gate two submissions 14<sup>th</sup> November 2022**

#### **Background and Strategic Context**

Anglian Water and Affinity Water have been working in partnership to develop the South Lincolnshire Reservoir (SLR) and Anglian to Affinity Transfer (A2AT) Strategic Resource Options (SRO), through the RAPID gated process to gate two.

As the work to develop both options has progressed leading up to gate two, and the WRE and WRSE draft regional modelling and WRMPs have been refined, the strategic context and associated need for these options has evolved.

The changes in the strategic context and need have changed between gate one and gate two, as follows.

#### **At gate one:**

- The SLR solution was developed on the basis that 100 MI/d of the 150 MI/d output of the SLR would be utilised in the Affinity Water region.
- The A2AT solution was developed to facilitate the transfer of 100 MI/d into the Affinity Water region, from Peterborough, where the scope of the SLR ended.
- There was no supply demand benefit from the A2AT solution to Anglian Water. However, there would have been some associated resilience benefits.

#### **In the refinement of the draft regional plans and WRMPs, over the course of gate two:**

- The WRSE and WRE draft regional plans have concluded that a transfer from Anglian region to Affinity Water does not represent best value for customers
- As such the need for SLR water to be transferred to Affinity Water has fallen away.
- The full output of the SLR has therefore become available for Anglian Water to utilise entirely within the Anglian supply system.
- With this additional volume of water available, the Anglian Water draft WRMP has concluded that the SLR delivers best value by resolving the supply demand deficits within Anglian Water's own supply area, as opposed to alternative solutions such as desalination.
- Progressing the northern section of the A2AT solution would enable Anglian Water to supply water from the SLR to the south of their supply area, in addition to meeting demand in Lincolnshire, with the SLR reservoir becoming part of the Ruthamford system of reservoirs.
- As well as being used locally, water from the SLR will be available to support customers across the south west of the Anglian Water supply area. This will require strategic connections into Ruthamford, including reaching further south than the scope of the existing SLR solution.

#### **At gate two:**

The draft WRMPs and regional plans confirm the position that the A2AT has not been selected in Affinity Water's plan, but that water from the SLR is required to be transferred further south than Peterborough, within the Anglian Water region.

To reflect the position in the draft WRMPs, the scope and partnering arrangements for the two SROs have been reviewed. A series of changes are being proposed, which are outlined in this paper and are also reflected in the main gate two submission documents for both SROs.

### **Summary of Options Considered and Proposed Changes**

As the Affinity water draft WRMP does not select the A2AT, it is proposed that the scope of both (a) the entirety of the Eastern route and (b) the Western route from Grafham into the Affinity region is not progressed beyond gate two.

Currently the scope of the SLR SRO includes a transfer to Peterborough in the Anglian Water region. Peterborough was likewise the source/starting point of the A2AT SRO. However, as Anglian Water has identified the need for the water to be transferred further south into the Ruthamford region and specifically to Grafham, it is proposed that the scope of the SLR SRO is extended to include a transfer, or transfers, further into the Ruthamford region, including to Grafham. This scope extension would include further investigation of the Peterborough to Grafham section (or “northern section”) of the A2AT Western route that has been progressed to gate two.

We have assessed the options for extending the scope of the SLR SRO, to include progressing the northern section of the A2AT, as set out in Table 1 below. We have taken financial, planning and legal advice on the relative merits of each of the options, reflected in the table. There is still a degree of uncertainty over the exact required capacity. In the A2AT gate two development work, an option with the capacity of 150 MI/d has been developed. However, it is unlikely that a transfer of this capacity, all the way south to Grafham, would be needed. As the Anglian Water WRMP is finalised, and the solution is developed to gate three, the scope will be refined.

**Table 1 - Options for progressing Etton to Grafham portion of A2AT**

Option	Delivery Route: DPC/SIPR	Consenting: DCO/TCPA	SRO Development Funding
<p>1. Northern section of A2AT (Peterborough to Grafham) merged into SLR scope and progressed as a single SRO.</p>	<p>DPC/SIPR available to combined scope</p>	<p>DCO preferred, with the broader SLR DCO submission as “associated development”</p>	<p>Proportion of A2AT budget to be transferred to SLR</p>
<p>2. A2AT de-scoped, retaining Peterborough to Grafham, remains an SRO</p>	<p>DPC available as currently; not suitable for SIPR. Option of in-house delivery</p>	<p>Likely TCPA as scheme does not classify as NSIP in its own right, would need section 35 direction for DCO.</p> <p>Potential to be delivered as associated development to the SLR DCO could be considered, depending on delivery strategy and programme</p>	<p>A2AT continues to be funded as standalone SRO</p>
<p>3. A2AT no longer SRO; Peterborough to Grafham delivered through Business Plan</p>	<p>DPC available as currently; not suitable for SIPR. Option of in-house delivery</p>	<p>scheme does not classify as NSIP in its own right, would need section 35 direction for DCO.</p> <p>Potential to be delivered as associated development to the SLR DCO could be considered, depending on delivery strategy and programme</p>	<p>Funding requested at PR24, along with other transfer solutions in WRMP. No AMP7 funding would be available to deliver the scope in combination with the SLR, risking missing potential efficiencies in programme deliver and procurement.</p> <p>Funding delay results in planning delay, impacting ‘water into supply’ date plus increasing the risk around the SLR consent</p>

It is proposed that Option 1 is followed, i.e. the northern section (as far as Grafham) is merged into the SLR scope and jointly progressed as a single SRO. This is in preference to A2AT being progressed as a separate SRO, or to incorporating the de-scoped version of A2AT into the next Business Plan. As

such, beyond gate two, a single SRO would cover all of the SLR related scope identified within the Anglian Water's draft WRMP and regional plans, along with its downstream transfers to Peterborough and beyond to Grafham.

The key benefits of this approach are:

- Efficiencies in SRO programme management i.e. one set of gate reports, one programme management team
- Efficiencies in procurement, planning and delivery.

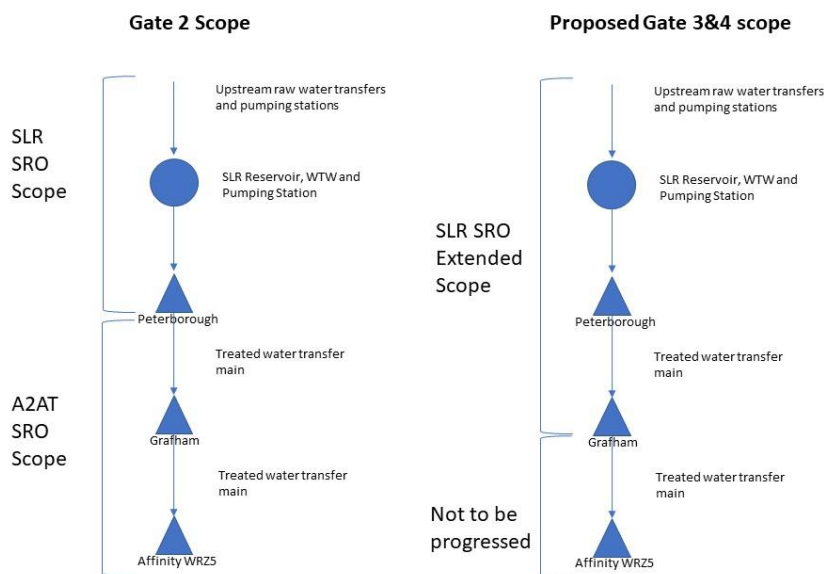
The detail of this proposed option is summarised in Table 1 and Figure 1 below.

It is important to note that if RAPID support Option 1, and this is how the solutions progress, the scope of the SLR solution within WRMPs and regional modelling, for the purposes of modelling and investment planning would still only extend to the water being transferred to Peterborough. The transfer to Grafham and any other associated transfers within supply system would continue to be assessed and modelled as separate options. This is to ensure that the maximum flexibility is maintained within the distribution of the water to ensure the final WRMP delivers best value for customers and the environment. However, for the purposes of progressing the SRO and associated DCO, the solution would be treated as one scheme, with the transfer scope extending all the way to Grafham and potentially other strategic locations.

**Table 2 – Proposed scope changes at gate two for SLR and A2AT SROs**

SRO	Scope developed to gate two	Scope proposed for gates three and four and into delivery
<b>SLR</b>	<ul style="list-style-type: none"> <li>Raw water transfer, pumping and INNS treatment from River Trent to River Witham</li> <li>Raw water transfer and pumping stations from River Witham to reservoir</li> <li>50Mm3 (of useable volume) raw water storage reservoir</li> <li>WTW and treated water pumping station</li> <li>150 MI/d treated water transfer to Peterborough</li> </ul>	<ul style="list-style-type: none"> <li>Raw water transfer, pumping and INNS treatment from River Trent to River Witham</li> <li>Raw water transfer and pumping stations from River Witham to reservoir</li> <li>50Mm3 (of useable volume) raw water storage reservoir</li> <li>WTW and treated water pumping station</li> <li>150 MI/d Treated water transfer to Peterborough</li> <li><b>Additional treated transfer from Peterborough to Grafham</b></li> </ul>
<b>A2AT</b>	<ul style="list-style-type: none"> <li>Treated water transfer from Peterborough to Affinity Water Resource Zone 5 (WRZ5). 50 ML/d, 100 ML/d and 150 MI/d (Peterborough to Grafham only) assessed.</li> <li>WTW in Affinity Water’s WRZ5</li> </ul>	None – proposed no further work is undertaken past Gateway 2.

**Figure 1 – Proposed scope changes at Gateway 2 for SLR and A2AT SROs**



### Implications for Solution Partnering Arrangements

The changes proposed, if supported by RAPID, would see Anglian Water take forward the SLR SRO, with the increased scope included from the A2AT.

As the option to utilise water from the SLR has not been selected in the Affinity Water draft WRMP, it is proposed that Affinity cease their involvement in the SLR. As such, the solution comprising the northern scope from the A2AT transfer will be developed to gate three and beyond as a single company solution.

If supported, these changes would be reflected into the project governance, future engagements with RAPID, quarterly reporting and gateway reporting.

### Implications for Total Solution Costs

The proposed changes would see the total solution costs for the SLR SRO increase to incorporate the scope of the transfer between Peterborough and Grafham. The updated total solution costs at gate two are presented in detail in the individual SRO reports, with the detail of the SLR to Peterborough scope in the SLR report and the detail of the Peterborough to Grafham scope in the A2AT report.

The purpose of the additional information presented here is to present an overall summary of the costs and implications of the proposed changes, to allow an easy read across between the individual reports.

Table 3 below summarises the gate two solution costs for the SLR, for the Peterborough to Grafham section of the A2AT, and for the total scheme costs for the combined SRO. As outlined above, for the purposes of modelling within the WRMP, the solution costs would not be combined.

**Table 3 – Solution costs for SLR and Peterborough to Grafham Section of A2AT (Sept 20 price base)**

	<b>SLR Solution Cost</b>	<b>Peterborough to Grafham section of A2AT</b>	<b>SLR plus Peterborough to Grafham Section of A2AT</b>
CAPEX	£1,487m	£217m	£1,704m
Costed Risk	£294m	£16m	£310m
Optimism Bias	£555m	£43m	£598m
Total	£2,336m	£276m	£2,612m

### Implications for future gate allowances and cost splits between partners

If the proposed approach is supported, the future gate allowances for each partner company would need to be reviewed. Set out here is a proposal, that has been agreed by both partner companies, as to how these changes could be reflected in the gate allowances. This table uses the gate allowances

The changes can be summarised as:

- The Affinity Water share of the SLR development costs remains with the SRO, and is transferred to Anglian Water as the single company progressing the SLR.
- The Anglian Water half of the A2AT development cost is utilised to fund the development of the Peterborough to Grafham section of the A2AT scope to be taken forward, and is merged with the SLR allowance to reflect Option 1 above.

These changes are summarised in Table 4 below, based on the allocations as set out in the PR19 Final Determination. The allowances for both solutions have been reviewed and are set out in the main gate two submissions. The PR19 development allowance for the SLR is not sufficient, and details of the requested allowance for gate three and four are set out in the main report.

SRO	PR19 allocated funding for gate 3 & 4 (17/18 price base)		PR19 gate 3 & 4 based on PR19 allowances (17/18 price base)	
	PRE PROPOSED CHANGES TO SCOPE AND SOLUTION PARTNERING		POST PROPOSED CHANGES TO SCOPE AND SOLUTION PARTNERING	
	AFFINITY WATER (£M)	ANGLIAN WATER (£M)	AFFINITY WATER (£M)	ANGLIAN WATER (£M)
SLR	£14.5m	£14.5m	£0m	£29m
A2AT	£4.5m	£4.1m	£0m	£4.1m
Gate 1 & 2 underspend to be carried over	£1.8m	£1.7m	£0m	£1.7m
<b>Total</b>	<b>£20.8m</b>	<b>£20.3m</b>	<b>£0m</b>	<b>£34.8m</b>
<b>Total Combined</b>	<b>£41.1m</b>		<b>£34.8m</b>	

**Table 4 – PR19 funding allocation for SLR and Peterborough to Grafham Section of A2AT transfer (17/18 price base)**

## Summary and Conclusions

- The A2AT has not been selected in the Affinity Water draft WRMP as the impact that this would have on the WRE region would be significantly more expensive and result in a worse value solution than the alternatives that are available within the WRSE region.
- Anglian Water has identified the need to progress the northern section of the A2AT scope from Peterborough to Grafham, to allow the water from the SLR to support demand in the wider Ruthamford systems in addition to in Lincolnshire and Peterborough.
- It is proposed that a transfer to move SLR water from Peterborough to Grafham is progressed beyond gate two, and merged with the SLR SRO scope.
- We are proposing the Anglian Water share of the A2AT allowance is utilised to progress this scope.