

Annex

✓ When we advise that the recommendation should be completed by

Planning Inspector's recommendations		Environment Agency advice			Supporting information	
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Supply side						
1	<p>The UST be added to the unconstrained and feasible options lists in accordance with EA2.1[14.5.3].</p> <p>Additional comments from the Inspector:</p> <p><i>'The UST and ST-Longdon Marsh options should be identified as feasible schemes in the plan and should be available for selection at the programme appraisal stage, notwithstanding further investigations...'</i> [13.4.52]</p> <p><i>'I.. do not consider it necessary for Thames Water to take the risk of including either of these options [UST or ST-Longdon Marsh options] in the preferred programme in the current plan.'</i> [14.5.3]</p>	<p>We advise that the UST is included in the company's unconstrained and feasible options list.</p> <p>We advise that this scheme should not form part of the preferred programme. Should this scheme form part of a least cost programme, we advise that the company rerun its programme appraisal without this option.</p>	<p>We advise the company to provide an update on the work it is undertaking to assess the feasibility of this option.</p>	<p>✓</p> <p>Our view is that this option should only be added to the feasible options list if the work the company proposes shows it to be feasible.</p>	<p>Thames Water is undertaking an Appropriate Assessment of Severn Estuary impacts.</p> <p>Work Programme 14</p>	<p>Our position at the inquiry is stated in EA33: EA2.1 and EA2.2.</p> <p>We agree with the Inspector's advice as a pragmatic approach for the current plan. We note that both the Inspector and EA33 recognise that the UST and Longdon Marsh options should be considered feasible on the evidence currently provided by the company.</p>
2	<p>A ST scheme using the Cotswold Canals be added to the feasible options list in accordance with the proposal by CCT[14.9.10].</p>	<p>Position the same as for the UST (see recommendation 1).</p>	<p>Position the same as for the UST (see recommendation 1).</p>	<p>✓</p> <p>Position the same as for the UST (see recommendation 1).</p>	<p>Position the same as for the UST (see recommendation 1).</p>	<p>Position the same as for the UST (see recommendation 1).</p>
3	<p>Thames Water updates the Plan as to the current position in relation to the availability of water from a reduction in bulk supplies to Veolia Water Central and Essex and Suffolk Water (EA2.4-2.7). Where it becomes known that such a reduction can take place, it should be taken into account in programme appraisal. Otherwise these are matters to be taken into account in sensitivity analysis [14.5.4].</p>	<p>We advise that the final WRMP summarises the current position based on discussions the company has had with Veolia Water Central and Essex and Suffolk Water.</p> <p>We do not advise the company to include transfers from Veolia Water Central and Essex and Suffolk in the revised programme appraisal.</p> <p>The company should consider the impact of changing these bulk supplies in its sensitivity analysis.</p>	<p>We advise the company to provide an update on the work it is undertaking to assess the feasibility of these options.</p>	<p>✓</p> <p>Our view is that these reductions in bulk supplies should be included if the discussions and assessment show that they are feasible.</p> <p>We advise that the 'Sunnymeads' discrepancy is resolved and the outcome included in the company's assessment of deployable output.</p>	<p>The company is looking into potential options of temporary bulk supplies and considering current and future bulk supplies from neighbouring companies and between Thames Water's water resource zones.</p> <p>Work Programme 22</p>	<p>It is our view that discussions with Veolia Water Central and Essex and Suffolk Water have not progressed to such an extent that the options can be classed as feasible. Furthermore, pragmatically, it is not clear on current information, how certain these options are towards the end of the planning period and therefore would have limited impact on the preferred solution.</p> <p>Note the 'Sunnymeads' discrepancy refers to an</p>

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						apparent transfer of 10MI/d from Thames Water to Veolia Water Central. Thames Water's rdWRMP included a 10MI/d export. However, it was not 'received' by Veolia Water Central and therefore effectively 'lost' between the two companies.
4	A 50 Mm ³ Abingdon reservoir scheme be included as a feasible option as sought by EA2.8 [14.5.5].	✓ Abingdon 50Mm ³ A and B options should be included in the final WRMP programme appraisal.		<u>The company should review its site selection report to ascertain whether alternative sites for a reservoir of 50Mm³ should be considered feasible.</u>		These options have been reviewed and costed as part of the inquiry. We therefore consider these feasible and require minimum work to include them in the revised programme appraisal for the final WRMP.
5	Large effluent reuse schemes be included as feasible options as sought in EA2.11 [14.5.6].	✓ We advise the company to include the effluent reuse options listed in Dr Lambert's proof (TW3/C Appendix B, Table 3) in the revised programme appraisal. We also advise a further reuse plant of between 25 and 95MI/d at Deephams is considered. We do not advise these options to include alternatives to reverse osmosis.	We advise the company to provide an update on the findings from its pilot plant at Deephams, its public perception work and investigations into alternatives to reverse osmosis.	We advise the company to consider and include, where appropriate, the results of the reuse work in its plan. If appropriate, we advise the company to consider a greater range of effluent reuse schemes and alternatives to reverse osmosis.	Thames Water is continuing its effluent re-use pilot plant using reverse osmosis at Deephams. Work Programme 14 <u>Thames Water must also investigate processes with a lower level of treatment than reverse osmosis at Deephams and Hogsmill.</u> <u>The company should also continue to investigate a wider range of sites and processes.</u>	At various points during the inquiry the company expressed the opinion that large effluent reuse schemes were considered infeasible. The company did not provide sufficient evidence to support this position. Our position remains as set out in EA2.11 (EA/33).
6	A breakdown of detailed costs be set out for each of the options in accord with EA2.12 [14.5.7].		We advise the company to provide the cost breakdowns needed for the Water Resources in the South East (WRSE) work to the agreed WRSE timescales.	✓ We advise the company to provide the breakdown set out in the Water Resources Planning Guideline (WRPG).	The company will be reviewing and improving the transparency of its current options development process. Work programme 21	This is a pragmatic solution. The company has provided breakdowns previously for the WRSE work. It is our view that the company should concentrate its efforts on inputting into the current round of WRSE modelling. This will include cost consistency review.
7	The feasible options list to include more smaller scale options, and in view of the deficit of around 60 MI/d, these to be in the range 10 – 60 MI/d, to be taken forward into programme appraisal in accord with EA2.13 [14.5.8].	✓ The additional schemes we would advise to be included in the programme appraisal would be as follows: London - New schemes included in TW3/C	We advise the company to provide an update on the work it has done to increase the range of schemes in its feasible options list.	We advise an appropriate range of options for the size of the deficit the company forecasts.	Thames Water is developing further options for resource development. Work Programme 20	The costing of new options takes time. We are satisfied that the inclusion of a mid-sized effluent reuse plant at Deephams provides a balance between choice in the programme appraisal and delaying the plan.

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		<p>Appendix B, Table 3 - A Deephams effluent reuse plant between 25 and 95 MI/d</p> <p>SWOX - New schemes included in TW3/C Appendix B, Table 4</p> <p>We also advise the company to consider how it would increase the range of options in the future.</p>				<p>We advise the company to provide a sufficient level of cost detail for scrutiny, with reasonable confidence in those costs.</p> <p>We advise the company to consider what the programme may look like if different options had been included in the programme appraisal.</p> <p>We suggest this is pragmatic way forward so that the company can concentrate on the work needed for WRMP14.</p>
Programme Appraisal						
8	The process of programme appraisal be made transparent as required by EA3.1. In particular the application of Thames Water's five programme appraisal criteria should be made clear.	<p>✓</p> <p>We advise the company to clearly explain the process of programme appraisal and decision making. We advise the company to assess each programme with reference to the five criteria in a fair and transparent way. However, we do not advise the current programme appraisal methodology to be revised.</p>		We advise the company to use the new methodology, as informed by the WRPG and Thames Water's continuing work in the plan.	The company is reviewing its decision-making process. Work programmes 26 and 27	<p>It is our understanding that, although there are flaws in the current methodology, a 'fit for purpose' preferred programme can be obtained using the existing methodology, supported by clear explanation of the methodology and explanation and justification of any decisions.</p> <p>The pragmatic approach therefore would be to revise the methodology for the next plan.</p>
9	Embodied and operational carbon impacts of all options and programmes be clearly presented in the plan in accord with EA3.2 [14.6.2].	<p>✓</p> <p>We advise the company to present the implications of both embodied and operational carbon in its programme appraisal.</p>		We advise that the plan follows the WRPG in its assessment and presentation of carbon impacts.		
10	The plan make it clear how double counting has been avoided as required by EA3.4 [14.6.4].	We advise the company clearly explains the programme appraisal methodology and decision-making. The programme appraisal should avoid double-counting of environmental and social impacts. However, we do not advise the current options appraisal or programme appraisal methodologies is revised.		<p>✓</p> <p>We advise that the new methodology is used in the plan.</p>	Position the same as for recommendation 8. Work programmes 26 and 27	<p>Although there are flaws in the current methodology, we believe that a 'fit for purpose' preferred programme can be obtained using the existing methodology, supported by clear explanation of the methodology and explanation and justification of any decisions.</p> <p>The pragmatic approach therefore would be to revise the methodology for the next round</p>

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						of planning.
11	A clear distinction be made between monetised and non-monetised impacts. In the discussion of the performance of its programmes, Thames Water should consistently describe and analyse the performance of all programmes against non-monetised environmental and social impacts (both positive and negative) as in EA3.6 [14.6.6].	We advise the company to clearly explain the programme appraisal methodology and decision-making. We advise the company to include a clear description as to how non-monetised and monetised costs have been considered. However, we do not advise the current options appraisal methodology is revised.		✓ We advise that the new methodology is used in the plan.	Position the same as for recommendation 8. Work programmes 26 and 27	See recommendation 10.
12	Where the level of accuracy as to costs applied to all schemes put forward for programme appraisal is not consistent, sensitivity testing be applied to the outcome of the comparison of costs as in EA3.7 [14.6.7].	The programme appraisal should contain a least cost programme. The company should consider alternative programmes and the sensitivity of costs as appropriate.		✓ We advise the company to consider the confidence it has in the costs of its schemes, improve the costs where appropriate, and take into account the confidence levels in its programme appraisal.	Position the same as for recommendation 6. Work programme 21	We agree with the Inspector's advice (14.6.7) that further work on this issue of costs and sensitivity testing should only be undertaken for the final plan if there are major differences in the accuracy of costs of the schemes put forward in a revised programme appraisal.
13	A single objective be adopted in programme appraisal for all the programmes considered (EA3.8). This objective should be "to close the gap between supply and demand at the lowest overall cost" [14.6.8].	✓				
14	Alternative programmes to provide a satisfactory solution to the supply demand balance without providing unnecessary surplus water unless that provides the most cost effective solution to meeting the deficit (EA3.12) [14.6.11].	✓				
15	References to 'long term risk' and those programmes, including the preferred programme, which have the objective of meeting 'long term risk' be deleted from the plan, and a revised programme appraisal be carried out (EA3.13, 3.14, 3.15).	✓				
Sensitivity Analysis and contingency options						

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16	A sensitivity analysis of Thames Water's key assumptions be carried out without 'long term risk' in accordance with EA4.5 [14.7.5].	✓				
17	A detailed sensitivity analysis be carried out to assess the impact of different potential sustainability reduction scenarios as required in EA4.1 and 4.2[14.7.2].			✓		<p>The Inspector has recommended that the company carry out sensitivity analysis on potential future sustainability reductions in its current plan (14.7.2). We consider this is not essential for a minimum approach to producing this final WRMP. We consider that this is something that could be done after publication of the final WRMP or as part of an annual review update.</p> <p>If the company decides to include sensitivity analysis on potential future sustainability reductions in its fWRMP, we would expect to see a range of range of scenarios, along the lines of that outlined in EA/39 presented at the Inquiry.</p>
18	An analysis be undertaken of the sensitivity of the plan to uncertainty in costs and in relation to both actual utilisation of schemes as well as dry year utilisation in relation to the 25 year NPV and the 80 year NPV. In relation to the 80 year NPV, uncertainty over future demand should also be considered in sensitivity analysis.(EA4.3 and 4.4)[14.7.4]	We consider that a 25 year NPV would be suitable for the final WRMP.		✓		The company put forward an 80 year NPV in relation to its Upper Thames Reservoir. We do not believe the company needs to an 80 year NPV for its final WRMP.
19	Contingency options beyond AMP5 be reviewed including the potential for aquifer storage and recovery (EA4.6) [14.7.6].	The final WRMP should include contingency options. However, we do not advise the company to do further work at this stage.	We advise the company to provide an update on ongoing investigation work and any conclusions.	✓		
Allowing for uncertainty						
20	Uncertainty around timing and yield of water supply schemes	We advise the company to consider sources of uncertainty and the	We advise the company to quantify the sources of uncertainty as	✓ We advise the company to		For the final WRMP, our view is that the baseline headroom

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	be assessed in accord with EA5.1.	implications of these sources.	probabilities We advise the company to include uncertainty around timing and yield as part of its target headroom assessment.	include these uncertainties in its plan.		assessment can remain the same as in the rdWRMP.
Other changes to the rdWRMP						
21	Any shortcomings in the customers' willingness to pay survey to be acknowledged in the revisions to the plan (GARD20) [14.9.8].		The company should provide an update.	✓		
22	Utilisation based AISC calculations to be undertaken for all programmes to be considered in the revised programme appraisal (GARD21) [14.9.9].	✓				
23	That text be included in the Plan to reflect the agreement between Thames Water and Ofwat [14.9.19].	✓				
24	That changes in the text of the Plan be made to reflect the agreement between Thames Water and CCW [14.9.20].	✓				
25	Factual corrections be made to the plan in accordance with TW140c.	✓				Some sections of the rdWRMP may not need to be re-written. TW has indicated that it would update selective sections of volumes 1, 2 and 6 and update table WRP4-FP as a minimum and if time would re-write selective sections of volumes 3, 5 and 7 and tables WRP2 and 3.