

**OXFORDSHIRE COUNTY COUNCIL RESPONSE  
ON WATER RESOURCES CONSULTATION  
EMERGING REGIONAL PLAN FOR THE SOUTH EAST**  
Consultation closing date: 14<sup>th</sup> March 2022

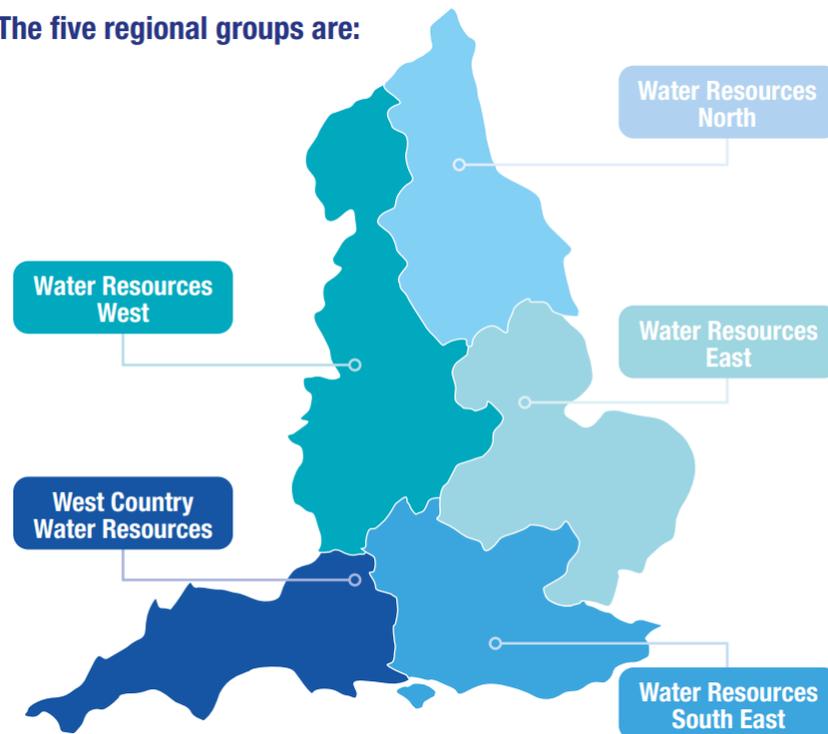
Draft response provided to WRSE before consultation closing date  
Final response provided after 15<sup>th</sup> March 2022 Cabinet meeting

## Introduction

1. Planning for future water supply needs to factor in climate change and protection of the environment. The Environment Agency's [National Framework](#) published by government in March 2020 explored England's long term water needs and set out the principles, expectations and challenges for five regional groups made up of the 17 English water companies and other water users. Those five regional groups have now produced consultations for emerging regional plans ([South East](#), [East](#), [West](#), [North](#) and [West Country](#)) in accordance with a [government guideline](#).

Graphic from  
WRSE  
consultation  
document  
page 3  
showing  
regional  
groups

### The five regional groups are:



2. The current consultations are not complete draft regional plans, although it was initially expected that such drafts would be available now. Instead, the results of these consultations, combined with further work, will lead to draft regional plans being produced later in 2022 (likely September) at the same time that draft individual company water resource management plans are produced for

consultation. Those later regional and company plans are expected to reflect 'best value' principles, whereas the consultations at the moment are based on 'least cost'. We object to the emerging regional plan for the South East as contained in the current consultation and seek that there are fundamental changes in approach reflected when the draft best value plan is produced. We believe the process for producing this plan is fundamentally flawed by lack of transparency and independent scrutiny, resulting in biased assessment of evidence and failure to challenge evidential and planning assumptions on value-for-money or cost-benefit grounds, with the likely outcome that overstated assessment of need and failure objectively to consider options will result in increased risk of failure to achieve desired outcomes, excessive costs and environmental damage. We have also responded on the consultations for the adjoining regions: West, East and West Country, and consider that the regional groups need to work more closely together, as other utilities do, and with interested parties such as county councils, such that all these regional plans better address the national issue of water supply networks. We expect to respond on the further consultations that arise later this year. We consider that better work by the regional groups with interested parties will identify best value options which do not involve progressing a South East Strategic Reservoir Option (SESRO) in Oxfordshire. Oxfordshire County Council has numerous concerns about the SESRO proposal as set out later in this response.

3. Although this is the first time for such water resources regional plans, it is currently proposed that the regional plan be updated every five years. This new process is non-statutory, unlike the statutory company water resource management plans which are produced for each five year period, the last being WRMP19s and the next being WRMP24s. Although Water Resources South East (WRSE) has produced many documents, invited comments, and kept a webpage updated, we consider that the process and governance of these regional plan making processes is fundamentally and irremediably flawed, by failure effectively to limit privatised monopolies from acting in their own interests rather than those of customers and therefore that there is a compelling need for better oversight by central and local government and interested parties including local authorities such as Oxfordshire County Council. At the moment, having the non-statutory regional plans produced by groups of water companies results in the profit-making motives of the water companies remaining to the fore, and therefore the real opportunities for public bodies and interested individuals to influence the plans are lacking.

*Key points above:*

- *Oxfordshire County Council objects to the emerging regional plan for the South East.*
- *Regional water resource groups should work together and with interested parties more closely so that the regional plans better address the national issue of water supply networks. Such joint work should identify best value options which do not involve progressing a South East Strategic Reservoir Option (SESRO) in Oxfordshire.*
- *The non-statutory regional plan making process is currently flawed and limits the ability of interested parties to influence the plans.*

## Existing water supply and proposals which don't involve new infrastructure

4. The Water Resources South East (WRSE) main consultation document, page 4, advises that up to six billion litres of water are supplied each day across the South East. Household customers use just over 145 litres of water per person per day on average. More than half of the region's public water supply comes from natural underground sources, the rest from rivers and springs. There are over 82,000 km of water pipes across the region.
5. Leakage from existing water pipes must be dramatically reduced to make the most of the existing network. The target in the emerging regional plan is to reduce leakage by 50% between 2017 and 2050. There is scope to reduce leakage faster, and by more, as is demonstrated by the ability of this solution to scale according to the demands in the three post-2040 scenarios. We believe that the water companies need to do more to reduce pipe leakage and ensure that replacement pipes are made to last.
6. The amount of water that individuals use can be reduced, for example if individuals use more water-efficient devices and become more conscious of the need and benefits of reduced water use. The target in the emerging regional plan is to reduce average individual use to 110 litres/day. We believe that the water companies need to do more to roll out water metering for awareness, provide information and education, and support innovation into water-saving devices to get to and in future exceed the target.
7. The WRSE emerging regional plan includes some reliance on the government introducing new policies that will deliver long-term reductions in water use. We believe the water companies need to do more to lobby government to bring about measures such as tighter water efficiency requirements for new homes within the Building Regulations. New homes with water efficient appliances, water butts, and possibly also grey water harvesting, can help avoid the need for new infrastructure being built.
8. Some of the existing water abstractions must be stopped or reduced given their environmental effects, for example on the rare chalk stream environments. We support work to identify, locate and return water so that there is a positive impact on the environment. Continued collaboration with the Environment Agency and Natural England is required to identify these. Careful work is required to ensure there is no over-estimate of the amount of extra water needed when such abstractions are stopped or reduced. The emerging regional plan forecasts that an additional 305 Ml/day is likely to be needed by 2040 once unsuitable water abstractions are stopped or reduced, but we consider that to be a significant over-estimate. We think there may be no need for a new strategic water resource option to replace the water lost to the system as a result of this environmental improvement if the forecast is brought in line with best evidence , and more emphasis is placed on reducing demand.

*Key points above:*

- *Water companies need to do more to reduce pipe leakage and ensure that new pipes are made to last.*

- *Water companies need to do more to roll out water metering for awareness, provide information and education, support innovation into water-saving devices, and lobby for government regulation for water efficiency.*
- *Continued collaboration with the Environment Agency and Natural England is required to stop or reduce unsuitable existing abstractions, while not over-estimating any need for new infrastructure as a result.*
- *Making the best use of the existing strategic infrastructure which currently allows for the distribution of up to six billion litres of water per day in the South East needs to be a priority for the regional plan.*

## **Strategic Water Resource Options**

9. Several strategic water resource options in England are currently being investigated. 15 of these are going through a 'standard gates' process and 4 through 'accelerated gates' established by the Regulators' Alliance for Progressing Infrastructure Development ([RAPID](#)).
10. Gate One submissions on the 'standard gates' were lodged in July 2021 and RAPID undertook a consultation on its draft decisions over September-October 2021. Oxfordshire County Council provided an officer response, focused particularly on the strategic water resource option identified as the South East Strategic Reservoir Option (SESRO) which is a proposal within Oxfordshire, between Abingdon, East Hanney and Steventon. RAPID's decisions were issued December 2021 and January 2022, those decisions indicating the level of information expected from the water companies promoting the strategic water resource options before the Gate Two deadline in October 2022.
11. The opportunity for interested parties to be involved in RAPID's process has been limited. We expect that information should be more readily available, and not redacted, and that there will be sufficient time for making considered comments on RAPID's draft decisions at Gate Two. There could also be better opportunities to comment on the proposals themselves, rather than just RAPID's draft decisions.
12. We welcome involvement on technical issues being considered through this RAPID process. It is likely that any of these strategic water resource options that progress will be Nationally Significant Infrastructure Projects and therefore will go through a Development Consent Order process rather than a planning application to the local council. We recognise the Development Consent Order process will address the nationally significant infrastructure proposals in detail and would expect to be involved in the process for any proposals in Oxfordshire.

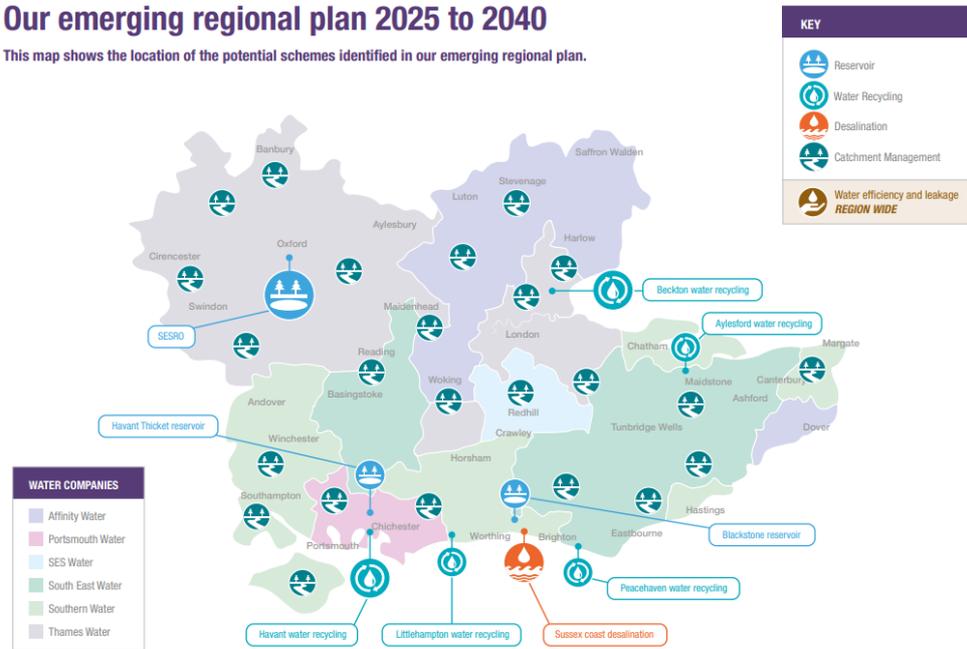
### *Key point above:*

- *The interaction of the RAPID gated process in relation to strategic water supply options, the regional plans and the water company management plans needs to be clear, and opportunities for involvement increased.*

### The South East Strategic Reservoir Option (SESRO)

- 13. The emerging regional plan consultation document identifies the SESRO as being required and built in the period 2025 to 2040. Water would be abstracted from the River Thames, near Culham, during periods of high flow and pumped into the reservoir. When flow in the River Thames is low and water is required elsewhere, water could be released back into the Thames for re-abstracted downstream. Reservoirs act to hold water when it is abundant, rather than having it run out to sea, in case it is needed at a later time.
- 14. The scale of the SESRO is not apparent in the WRSE consultation document. The graphic on page 26 of the document indicates that the SESRO is bigger than the Havant and Blackstone reservoir proposals, which are also required in the period to 2040, but does not appropriately depict the quantum of difference. The Havant reservoir has planning permission, granted in October 2021 from the local councils, Havant Borough and East Hampshire District, and will span some 160 hectares and provide a deployable output of some 21 MI/day. The largest size SESRO would span some 700 hectares and have a deployable output of some 293 MI/day. Page 20 of the consultation document refers to the SESRO, Havant and Blackstone reservoirs together providing for 325 MI/day, and it is therefore understood that it is the largest size SESRO that is being proposed. If the SESRO is to provide 293 MI/day, and Havant 21 MI/day, then it is assumed that the Blackstone reservoir proposal is also relatively small, providing for some 32 MI/day. Similarly, it is understood that all the additional reservoir proposals in the emerging regional plan between 2040 and 2060 are relatively small. It may be the case that some respondents have not commented on the consultation document in relation to the SESRO in the manner they might have done if the scale was more apparent.

Graphic from WRSE consultation document page 26 showing proposals from 2025 to 2040 including three reservoirs



Graphic from water company submission to RAPID July 2021 – SESRO 150 Mm3 option



15. The WRSE consultation document does not refer to smaller SESRO variants. It is understood that there are four single size variants catering for between 75 Mm3 of storage and the largest of 150 Mm3. In addition there are two variants for phased reservoirs, one where the first reservoir caters for 30 Mm3 of storage and then is added to with one of 100 Mm3 storage; and the other where the first reservoir caters for 80 Mm3 of storage and then is added to with one of 42 Mm3. The regional plan process needs to properly evaluate all options of size and their effects.
16. The emerging regional plan consultation also does not properly address the reliance it places on the SESRO when such a reservoir (in common with all reservoirs) will not be able to be filled during periods of prolonged drought and could be rapidly emptied. The implications of this in terms of resilience, and also in terms of actual effects e.g. algae growth, should be explicitly considered when moving towards a 'best value' plan.
17. Oxfordshire County Council has formed some views on the SESRO over the several years that it has been proposed. We have concerns about the SESRO that include:
- Overestimation of its ability to continue to supply water in a prolonged drought
  - Displacement of alternative schemes that would bring equivalent amounts of water into the Thames valley from less-stressed regions and improve public benefit.
  - The carbon footprint, including the embodied carbon of construction materials.
  - Significant construction effects over a long period.
  - Impacts on the landscape e.g. as a result of the bunds.
  - Impacts on the amenity of those living nearby.
  - Impacts from traffic including congestion and air quality issues.
  - The need for active travel and public right of way connections.
  - The potential for the railway to be used to reduce impacts on roads.
  - How the Hanney Road / Steventon Road will be diverted.
  - Impacts on flood risk.
  - Water quality including potential for algae growth.

- Impacts on archaeology.
- Impacts on biodiversity.
- How biodiversity net gain would be provided for.
- How recreational benefits would be secured.
- The potential to replace existing solar farms on the land.
- The high cost of the reservoir and associated pipeline transfers.

18. In relation to cost, the SESRO will be very expensive to construct, with estimates of over £1 billion just for the reservoir, and further significant costs for associated water transfers.

19. It should be explicitly noted and considered that the SESRO is located in an area adjoining two settlements (East Hanney and Steventon), and in very close proximity to other settlements (e.g. Drayton, Marcham and Abingdon) and therefore will impact on those residents. Other reservoir proposals are in more rural areas. Some of the smaller variants of SESRO would likely have fewer effects on residents, but the SESRO contained in the emerging regional plan would have significant effects.

20. In addition, the proposal within the WRSE consultation document that SESRO be constructed before 2040, means that it will have a higher carbon footprint than if any variant was constructed at a later date, because the national electricity network has not yet been decarbonised, and construction vehicles will still be petrol or diesel powered.

21. The WRSE consultation document mentions (page 21) that it could be possible to replace the SESRO 'but only under the least challenging future scenario'. We do not accept that the scenario needs to be the least challenging as we do not accept the calculations on which the future scenarios are based and we consider that the SESRO can be replaced with other, better options. Even if there is a need for a strategic resource option for water supply, we consider that the relative merits of all the strategic resource options indicate that there are better options than SESRO.

*Key points above:*

- *The SESRO is larger than apparent in the WRSE consultation document.*
- *The regional plan process needs to properly evaluate all variants of SESRO size and their effects.*
- *We have concerns about the SESRO that include:*
  - *Overestimation of its effectiveness*
  - *Displacement of schemes of superior effectiveness and benefit*
  - *The carbon footprint*
  - *Construction effects.*
  - *Impacts on the landscape.*
  - *Impacts on amenity.*
  - *Impacts from traffic.*
  - *The need for active travel and public right of way connections.*
  - *The potential for the railway to be used.*
  - *How the Hanney Road / Steventon Road will be diverted.*
  - *Impacts on flood risk.*
  - *Water quality.*

- *Impacts on archaeology.*
- *Impacts on biodiversity.*
- *How biodiversity net gain would be provided for.*
- *How recreational benefits would be secured.*
- *The potential for solar farms.*
- *The cost of the reservoir and associated pipeline transfers.*
- *We do not agree with the calculations on which the future scenarios are based; and consider that the SESRO can be replaced with other, better options.*

## **Pipeline transfers associated with the SESRO**

22. The SESRO requires some additional new pipelines to transfer water. These have their own costs and issues.

23. Although originally a Thames Water proposal mainly to supply its London customers, by releasing water into the River Thames when needed, Thames Water and Affinity Water have been jointly promoting the SESRO for the last few years, and a transfer pipeline from the River Thames in Buckinghamshire to Affinity Water providing for up to 100 MI/d for the north of London is an integral part of the proposal, although it is a project in its own right. The cost of that pipeline in the information provided to RAPID in July 2021 would be between £184m and £402m.

24. The emerging regional plan now also indicates that there should be a transfer pipeline to Southern Water to provide up to 80 MI/d for that area. That pipeline would start near the reservoir along the River Thames at Culham in Oxfordshire and move water to a water treatment works near Southampton. It therefore appears that SESRO is being promoted to provide for water supply well outside of the Thames Valley area. The cost of that pipeline in the information provided to RAPID in July 2021 would be between £604m and £1,307m. To date there has been little opportunity to comment on the specifics of a pipeline proposal from Culham which would involve land in Oxfordshire. Concerns are likely to include:

- Construction effects.
- Whether the location of any structures is appropriate.
- Impacts on archaeology.
- Impacts on biodiversity.
- How biodiversity net gain would be provided for.

### *Key point above:*

- *In addition to environmental effects from constructing the SESRO, the environmental effects of related new significant pipeline transfers need to be considered.*

## **Oxfordshire County Council's interests**

25. Oxfordshire County Council has statutory roles such as being the Highway Authority and Lead Local Flood Authority. We work closely with Vale of White Horse District Council, South Oxfordshire District Council, Cherwell District

Council, West Oxfordshire District Council and Oxford City Council on strategic matters.

26. Oxfordshire County Council has a history of opposition to the SESRO. We opposed the similar reservoir proposal contained within the 2009 Water Resource Management Plan by Thames Water which went to a public inquiry in 2010. We again indicated our concerns on the SESRO in respect of the draft Water Resource Management Plans in 2018 and 2019 by Thames Water and Affinity Water. Most recently, Oxfordshire County Council agreed a motion on 2<sup>nd</sup> November 2021 opposing the SESRO.

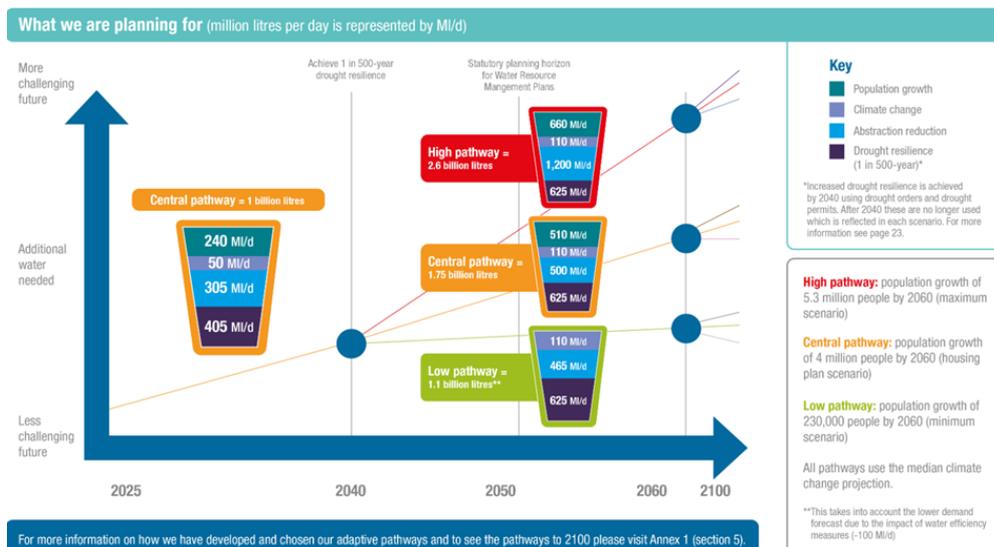
27. We object to the SESRO being stated as “required” in the emerging regional plan for the South East. We consider that the regional planning approach to date is not resulting in better strategic planning than the previous approach where the water companies produced their individual Water Resource Management Plans. There needs to be wider thinking of what is best value in terms of water supply across England and better consideration of options across regional boundaries.

**Key points above:**

- Oxfordshire County Council is a key stakeholder in the water resource regional plan process given its general roles and responsibilities, and specifically its involvement over many years expressing concern about the suggested SESRO.
- There needs to be wider thinking of what is best value across England and better consideration of options across regional boundaries.

**The extent of the need for additional water supply**

Graphic from WRSE consultation document page 12 showing additional water proposals



28. For the first 15 years of the planning period, 2025-2040, WRSE has forecast that 1 billion extra litres of water supply are needed for the South East in accordance with a forecast described as a central pathway. The details of this pathway are not

disclosed, part of a pattern of failure to be either transparent or open. After 2040, the plan splits into three alternative pathways. From 2060 the plan splits further into nine pathways (the three alternative pathways from 2040 to 2060 each have three alternatives). The emerging plan is described as 'adaptive' for the period beyond 2040 but is not adaptive before that.

29. The forecast need for extra water supply is categorised in four areas: population growth, climate change, abstraction reduction and drought resilience.
30. Oxfordshire County Council expects the water companies to plan for sufficient water supply. The Oxfordshire Infrastructure Strategy (OxIS), Local Plans and the emerging Oxfordshire Plan 2050 recognise that reliable future water supply is needed. However, we think the amount of additional water being forecast as needed is excessive. The estimate of 1 billion extra litres per day by 2040 is a significant increase in 15 years on top of the current 6 billion litres per day current supply. This forecast water supply need is partly based on estimates of population growth which appear to be excessive estimates of the need for new water resulting from abstraction reduction, and a single view on climate change. If WRSE were to use realistic science-based estimates, or those from reliable sources (for example ONS population projections), there would almost certainly be no need for such a significant amount of additional infrastructure, with all its associated financial costs and environmental costs including carbon costs. Given the uncertainty, it is wrong to lock in early decisions to progress huge controversial new strategic infrastructure options such as the SESRO. Instead, the regional plan should be able to adapt to various scenarios going forward. This would much better be achieved using the highly scalable options that emerge in the higher use scenarios: leak reduction, recycling and transfers from outside the region, which between them could produce nearly ten times the supply from the reservoir (which we believe to be overestimated), as well as, in the case of external transfers, producing outcomes of real public amenity such as canal restoration.

*Key point above:*

- *The forecast need for additional water supply appears to be exaggerated, particularly given the uncertainty about future population growth, and given this, the regional plan should not lock in early decisions to progress huge controversial new strategic infrastructure options such as the SESRO.*

### **How to provide for additional water supply options**

31. The SESRO is not the only additional water supply option in the emerging WRSE regional plan. There are also other reservoirs, several water recycling schemes, desalination schemes, aquifer storage recovery, river abstraction and water transfers from other regions.
32. The WRSE consultation document indicates that the additional water supply needed up to 2040 will be found as follows: 54% from demand management; 21% from three new reservoirs; 9% from five water recycling schemes; 1% from one desalination plant and the remaining 15% from other. There are no transfers from outside of the South East planned in this period.

33. WRSE estimates that the additional operational activities driven by the plan, combined with the carbon associated with new infrastructure, could produce 14 mtCO<sub>2</sub>e carbon emissions over the next 50 years. It is stated in the consultation document that there is a need for additional work on managing the carbon impact. WRSE also notes that it is likely that the government will increase the cost of carbon in construction projects to promote more low carbon alternatives, and this could change the type of options that are included in the final regional plan and the way in which new infrastructure is built.
34. The best value regional plan should set out principles which don't just look at cost. Low carbon and least environmentally damaging solutions should be preferred. We recommend a principle to seek to use existing or refurbished infrastructure, such as transferring water using canals, as the adverse environmental effects are more limited than other options, and the positive environmental effects and public amenity may be great. Where that is insufficient, there can be a principle favouring infrastructure which is underground such as pipelines to transfer abundant water, as the environmental effects tend to be limited to construction. For the South East, some preference should be given to bringing water in from other regions given the level of water stress and difficulty in sourcing additional water within the region due to environmental constraints.

*Key point above:*

- *The next stage consultation on best value draft regional plans should set out principles giving preference to low carbon and least environmentally damaging solutions, thereby favouring use of existing or refurbished infrastructure such as canals. Where that is insufficient, new pipelines may be appropriate to transfer water into the South East given the level of water stress and difficulty in sourcing additional water within the region.*

### **Reservoirs in South Lincolnshire and Fenland and transfers from them**

35. There are two reservoir options being put forward in the emerging regional plan for Eastern England. They are both strategic resource options that have passed RAPID's Gate One. Both reservoirs would be in rural areas and we understand that they are not locally controversial. The South Lincolnshire reservoir is estimated to have a deployable output of between 151MI/d and 229MI/day. The Fens reservoir is estimated to have a deployable output of 99MI/day.
36. The Eastern England reservoirs could enable a transfer of water to Affinity Water in the South East, where there is the greatest need to reduce chalk stream abstraction. However, the consultation document for the South East, on page 27, indicates that this is likely only to be needed in a high growth scenario after 2040. We consider instead that these reservoir proposals should be progressed quickly and designed with a pipeline to the South East. Such transfers into the South East are envisaged in the recent December 2021 RAPID decision. These transfers could be part of a solution to avoid the need for the SESRO.

37. We have also commented on the emerging Eastern England regional plan to this effect. We consider that WRSE and WRE should work more closely together to facilitate best value solutions.

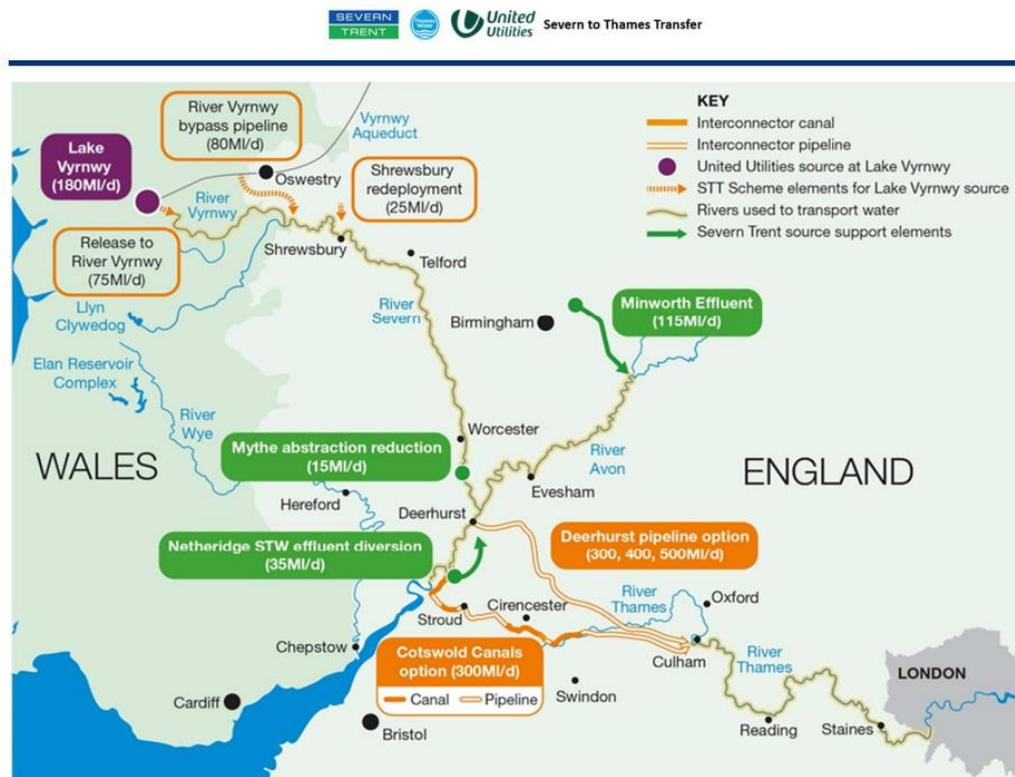
*Key points above:*

- *There are new reservoir proposals in South Lincolnshire and Fenland and the opportunity to transfer some water from those into the South East should be included in the plans.*

**Severn to Thames Transfer (STT)**

38. The Severn to Thames Transfer (STT) is a proposal to transfer water from the River Severn in the Water Resources West region to the River Thames in the Water Resources South East region. In order to support transferring water from the River Severn, other supply solutions for the River Severn are also being investigated such as Vyrnwy Reservoir (which is in Wales but is functionally part of the supply system for England and the abstraction is licenced to United Utilities), and Minworth Effluent Reuse (in the West of England).

Graphic from water company submission to RAPID July 2021 – STT and source support



39. The two variants are to transfer the water either via a new pipeline (from Deerhurst in Gloucestershire to Culham in Oxfordshire which could provide for 300, 400 or 500 MI/d); or to reinstate parts of the Cotswold Canals and augment that with pipelines (from Gloucester Dock to Culham which could provide for up to 300 MI/d). We note this option would supply more than the equivalent of the SESRO, but bring extra water into this region, as well as restoring a heritage asset and public

amenity. Both options would deliver the water to discharge into the River Thames at Culham. To supply sufficient water, various source options are being considered. The transfer is being jointly promoted by Thames Water, Severn Trent Water and United Utilities.

40. The STT proposal includes water treatment works at the intake locations to mitigate potential impacts on water quality or from invasive species on the River Thames. A discharge outfall structure would need to be constructed within the banks of the River Thames at Culham.
41. The emerging regional plan for the South East indicates a need for STT post-2040. It is identified as being needed in both the central and high pathways, with the high pathway involving a greater transfer of water.
42. STT is a much preferable alternative to the SESRO, and it is entirely unclear why the emerging regional plan seeks to promote SESRO first. Investigation of the option of STT first is not apparent. Together with other options, or following a re-evaluation of forecasts, it could be that STT would avoid the need for SESRO being built in the long term. We also understand that it could complete a number of years earlier, which would be an advantage in the event of droughts in the mid and late 2030s
43. The diagrams on page 27 in the consultation document showing the transfer are unclear as there is only one arrow which is meant to encompass both the Grand Union Canal transfer and the Severn Trent Transfer proposal.
44. To date there has been little opportunity to comment on the specifics of a STT proposal which would involve land in Oxfordshire. Concerns are likely to include:
  - The relative merit and cost of the options of a transfer of water along the Cotswold Canals or via a pipeline across the Chilterns.
  - Whether the potential for invasive species migrating to the River Thames is negated or in fact overstated, given that the two watercourses were previously connected by the canal.
  - Construction effects.
  - Whether the location of any structures is appropriate.
  - Impacts on archaeology.
  - Impacts on biodiversity.
  - How biodiversity net gain would be provided for.
45. We have also commented on the emerging Water Resources West regional plan to this effect. We consider that WRSE and WRW should work more closely together to facilitate best value solutions.

*Key point above:*

- *The STT is a proposal to transfer water from the West to the South East, that should be further considered, and brought forward in time if needed.*

## Grand Union Canal Transfer

46. The Grand Union Canal transfer is a proposal to transfer water from Minworth wastewater treatment works in the West via the Grand Union Canal to Affinity Water in the South East, supplying customers with up to 100Ml/d. The Grand Union Canal would be upgraded as part of this and there would be new pipeline connections at either end. There are three alternative locations shortlisted for the southern end in Hertfordshire (Tring, Hemel Hempstead and The Grove) where there would be abstraction and treatment facilities. Severn Trent Water and Affinity Water are jointly promoting this water supply option. The route does not go through Oxfordshire.

Graphic from water company submission to RAPID July 2021 – Grand Union Canal Transfer



47. The option appears to sensibly use an existing canal resource to get water from the Midlands to London. It also brings extra water into the South-East region, which is the most water-stressed in the UK.

48. The emerging regional plan for the South East provides for this Grand Union Canal option only post-2040, and only in the high pathway. Given that this appears only in the high pathway, it might never be pursued if the emerging regional plan is not changed.

49. We note that the WRSE consultation trumpets the potential benefit of restoring canals; and are at a loss to understand why "light touch" options such as this, with obvious co-benefits, are not automatically preferred to destructive heavy engineering solutions such as SESRO. This may be because no cost data is included, though inspection of the cost scaling with volume into the high pathways does not suggest a massive difference in cost/MI.

50. Also, it is not clear why STT is preferred over the Grand Union Canal transfer.

### Key point above:

- *The Grand Union Canal transfer is a proposal to transfer water from the West to the South East, that should be further considered and brought forward in time if needed.*

## Water Recycling and Desalination

51. There are a number of schemes for water recycling proposed within the emerging regional plan, including four which are within the RAPID gated process. A key issue that appears to be raised is drinking water quality, and this requires further investigation. However, given that most of the Thames catchment from which water is currently drawn is polluted with raw sewage, it is difficult to understand this as a problem. Only 9% of the additional South East water supply need to 2040 is proposed to come from 5 water recycling schemes; yet the amount from 2040 to 2060 varies from 12% to 24% of the water supply need, making this one of the most obviously scalable solutions.
52. There is one existing desalination plant in London. Only one additional desalination scheme in the Shoreham area is envisaged in the emerging regional plan for the South East to 2040, providing for only 1% of the additional South East water supply need. The number of desalination schemes envisaged increases to 6 schemes in a high pathway from 2040 to 2060, providing for up to 11% of the additional South East water supply need.
53. It may be that there are additional opportunities for water recycling and desalination schemes. These may be relatively small and innovative schemes, compared to the SESRO, and therefore they should be further considered.

*Key point above:*

- *Additional water recycling and desalination facilities should be further considered.*

## Consultation questions

54. Our comments below on the consultation questions should be read in conjunction with the text above.
- a) *Abstraction reduction to protect the environment is likely to be the single biggest driver of investment in water resources over the next 25 years. Do you agree with our approach to establishing the appropriate level of abstraction reduction required across South East England?*  
We agree that abstraction reduction to protect sensitive environments is important. However, there is no process transparency and as such we do not believe that appropriate calculations have been made on how much additional water is needed as a result of abstraction reductions. Changes are required in the approach, to identify appropriate levels of abstraction reduction focused on ecologically sensitive chalk streams. Giving this matter some priority will make it clearer how much additional water is needed as a result.
- b) *We'd like to hear your views on how we prioritise where abstraction is reduced.*  
This is not a matter that we are responding on.

- c) *Are there any other factors that you think should be considered as we prioritise where abstraction could be reduced in the future?*

There should be a multi-criteria approach to prioritise catchments where abstraction reduction will deliver the greatest benefits. It is also necessary to consider the environmental impact and cost of replacement sources of water. To date, there seems a lack of any attempt at cost-benefit analysis.

- d) *We have assessed the future water needs of the other sectors that don't rely on the public water supply provided by water companies. Do you agree with our assessment?*

This is not a matter that we are responding on. However, it is entirely unclear how a fully decarbonised grid requires water for electricity generation.

- e) *We've described our adaptive planning approach and the scenarios we've included in our adaptive planning pathways. Do you agree that we have planned for the right scenarios in each of the pathways with a wide enough range for each of our key challenges through our adaptive planning approach?*

We do not agree that these are the right scenarios. We find the narrative unconvincing and misleading. We believe that the combination of a perfect monopoly, where customers can neither switch provider nor leave the market means that the WRSE has failed to challenge absurd planning assumptions (500y drought, population growth, environmental requirements), for which customers will have no option but to foot the bill. Any competitive industry would have been looking to minimise impact on customers and have pushed back and looked at realistic options. This results in scenarios that all overstate the likely demand for water and justify massive spending on very possibly unnecessary infrastructure. In our opinion, the consultation is (by accident or design) obscurantist and impossible to assess or challenge, due to lack of numerical data, objectivity or cost-benefit analysis and we come to the conclusion, from other independent sources, that they are not adequately supported by evidence. We are concerned at the total lack of any attempt to justify the chosen fixed pathway to 2040 and can only conclude that it is the result of private water companies taking the opportunity to promote their pet schemes without any effective scrutiny. We find the proffering of putative "customer opinions" as part of option appraisal in place of scientific, engineering or other predictive methodologies an abuse of data. We cannot find a single element of justification for the SESRO to be stated as "required in all scenarios", when it is perfectly evident that it is only justified by high input estimates and it is perfectly clear there are a number of other equally valid and less environmentally destructive options. We consider that changes should be brought in cautiously.

- f) *Do you support our approach to treat each pathway as equally likely and not choose a core pathway beyond 2040?*

We believe all the pathways set out in the current consultation to be seriously biased towards overestimating water requirements. We regard the failure to publish objective and numerical calculations as unacceptable. We support an approach which is adaptable to various pathways. There should not be a core path to 2040 as it is not adaptable. More time is needed to review all of the strategic water resource proposals that are part of the RAPID process and further time is needed to determine future water needs, for example updating population forecasts,

understanding the impact of the recent pandemic and the move to home working. The 2021 census information is also about to be published.

- g) *Do you have any other comments on our approach to addressing the challenges that are facing South East England?*

Yes. We take the view that an approach that relies on a monopoly cartel, with no independent scrutiny, making decisions the full cost of which can be passed to a captive customer market is an abuse of monopoly power. In particular, we consider that more and better work inter-regionally and with interested parties is required. The approach to address the challenges that are facing South East England requires further consideration of the potential to transfer water, particularly from other regions where water resources are more abundant due to higher rainfall.

- h) *Reducing the demand for water through leakage and water efficiency activity contributes to more than half of the total amount of water needed in the first 15 years of the emerging plan, the balance then shifts to include a greater reliance on supply side solutions, particularly in the more challenging future scenarios. Water companies are committed to delivering these reductions, but they are reliant on customers making sustained reductions in their water use over the long-term. Do you think our plan strikes the right balance between demand and supply solutions and the risks associated with delivery of such solutions?*

We think that water companies need to do more to bring about demand-side solutions. Thames Water, in particular, needs to better address leakage as it currently has high rates of leakage compared to other water companies. We believe that supply side solutions which minimise environmental impact and maximise water reuse should be accelerated and form the mainstay of the response from 2025.

- i) *The plan assumes that the Government will introduce new policies that will support more efficient use of water across society through labelling of water-using products by 2024, introducing a minimum standard for all water using products by 2040 and tightening the water efficiency requirements within the Building Regulations for new homes by 2060. Do you support these interventions and the timing of their introduction?*

We support government interventions of that nature. We consider that water efficiency requirements for new homes should be set for sooner than 2060, if necessary, by a phased approach with requirements becoming more stringent over time. Water efficiency requirements within the Building Regulations for some types of non-residential development should also be considered.

- j) *Do you think it is appropriate for Temporary Use Bans and Non-Essential Use Bans that reduce demand for water further during droughts to be used as options in this regional plan?*

Yes, we think that such measures may be needed as options during some droughts, reflective of the need for behaviour change during such events.

- k) *Do you agree with the mix of options that provide new water supplies for the region within our plan (reservoirs, desalination, water recycling, new transfers, improved abstraction from groundwater storage and ASR schemes). Do you think that some options should feature more or less in our plan to secure future water supplies?*

We do not agree with the mix of options. See above. We believe solutions that bring extra water into the South-East should be prioritised over those that do not, and that restorative and low-impact schemes should be prioritised over destructive engineering solutions. We do not believe that the need for the SESRO has been established and reject the statement that it is “required” as plainly inaccurate.

- l) *Do you support the use of new, potentially long pipelines to move water around the region?*

We have a number of reservations about long pipelines, but in general we support moving water around the region and inter-regionally.

- m) *We have identified where water companies might investigate a number of new, more innovative nature-based solutions to improve the region’s water catchments. Whilst these options can provide multiple benefits, the fact they are still relatively new can make it more difficult to be certain of the benefits that will be delivered and the return on investment. Do you agree that we should promote new, more innovative nature-based solutions in our plan to develop a better understanding of their future value and role in delivering water supplies and wider environmental improvements?*

We generally support more innovative nature-based solutions and believe they should be developed as a first priority, in the early part of the plan, whilst credible estimates of future need are being developed. Nature-based solutions have the potential to deliver a wide range of benefits for nature and people. Engagement should be undertaken with a wide range of stakeholders, including local authorities, to identify opportunities to deliver the greatest environmental gains, potentially aligning with other projects.

- n) *Do you support our approach to stop using the majority of Drought Orders and Permits, only continuing to use a limited number during droughts until we achieve one in 500-year drought resilience and stopping their use after 2040 unless we experience a drought more severe than a one in 500-year event?*

This is not a matter that we are responding on.

- o) *Overall do you agree that the emerging plan, which presents the most cost-efficient adaptive planning solution, should be used as the basis to further develop our draft best value regional plan?*

No. We believe the process to be irremediably flawed due to failure to mitigate the self-interest of the monopolies driving it. We believe fundamental process redesign is required to ensure transparency, decision-making in the public interest and protection of bill-payers from expensive, environmentally damaging and very possibly unnecessary prestige projects. We have very grave doubts as to the credibility of the assumptions and forecasts made. We think that significant additional work is needed, so do not agree that the approach set out in the current consultation should be used as the basis to develop the draft best value regional plan.

## Conclusion

55. Oxfordshire County Council believes that the current process is irremediably flawed by a failure to guard against self-interest and groupthink among what is in effect a monopolistic cartel. We regret the lack of numerical, cost-effectiveness or cost-benefit data. We believe there is no objective or evidence-based reason for the SESRO to be included in the forthcoming best value water resources regional plan for the South East and that disinterested assessment would demonstrate there is insufficient evidence of need, and there are other water resource options which will be better value and much less environmentally damaging which should logically be developed and deployed first.
56. In respect of need, there are further opportunities to reduce demand, the forecasts of population growth are in excess of the ONS values, and we think it highly likely that there will be less additional water needed as a result of abstraction reductions than suggested.
57. In respect of other options, we consider that the inter-regional opportunities have not been fully examined. Transferring more water into the South East is likely to be better value and should be deployed earlier. The SESRO is proposed in a relatively densely populated area and many other water supply options would likely affect fewer people, be better for the environment, be lower cost, be more effective, and have a lesser carbon footprint.
58. The best value draft regional plan should include principles giving preference to low carbon and least environmentally damaging solutions, thereby favouring use of existing or refurbished infrastructure and smaller, more innovative schemes. It should also contain an explicit independent mechanism for ensuring best value for customers, including objective, independently verified cost-effectiveness and cost-benefit assessment.