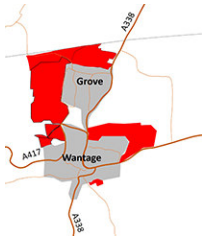
Wantage and Grove Campaign Group



28 April 2023

Ofwat/RAPID Gate 2 Draft Decisions

Dear Sir/Madam

This is our response to the 'Draft Decisions' on the Strategic Resource Options which were published on RAPID's web-site on 30 March 2023.

Introduction

This response covers the following points:

1. Information about the Wantage and Grove Campaign Group
    - Who we are
    - Where we are
    - Our interest in the Gate 2 Draft Decisions
2. Summary of our responses
3. Our detailed feedback to the Gate 2 Draft Decisions covers:
    - South East Strategic Reservoir Option (SESRO)
    - Thames Water to Affinity Water Transfer (T2AT)
    - Thames Water to Southern Water Transfer (T2ST)
    - River Severn to River Thames Transfer (STT)
    - Minworth SRO
    - Severn Trent Sources
    - Grand Union Canal Transfer

1. The Wantage and Grove Campaign Group

1.1 **Who we are**

The Wantage and Grove Campaign Group is a non-party-political group of over 1000 individuals who live in and around Wantage and Grove mainly in the OX12 postcode in Oxfordshire. We are not against any development in Wantage and Grove but:

- Developments should be proportionate and sustainable; and
- The infrastructure should enhance and improve quality of life for its residents.

1.2 **Where we are**

Wantage and Grove and adjacent villages comprised over 15,000 households at the 2021 census. We are situated in the centre of the Vale of the White Horse. This is a

predominantly rural area located in south-west Oxfordshire and is bounded to the north and the east by the River Thames and to the south by the North Wessex Downs Area of Outstanding Natural Beauty (AONB). The Vale is located between the larger centres of Swindon, to the south-west; Oxford, to the north-east; Newbury, to the south; and Didcot, to the south-east.

1.3 **Our interest in the 'Draft Decisions' on the Strategic Resource Options**

This plan affects us as residents of the area within the Vale of the White Horse very close to the proposed site of the South East Strategic Reservoir.

2. Summary of our responses

2.1 **Financial Benefit**

All water companies have a statutory right to make a real return on Regulated Capital Value in all future years and all of the projects in these draft decisions are Capital projects and will therefore increase the Regulated Capital Value, so all projects carry an automatic right to improve shareholder returns at the cost of the consumers, and to raise water bills as a result of increased Regulated Asset Base.

Therefore it is in the interest of the water companies to favour capital projects over the operating costs of reducing leakage and supporting consumers to reduce usage.

We strongly support the call by the Group Against Reservoir Development (GARD) for the inclusion of the financial effects of Regulated Capital Value in the Inter-generational Equity Metric included in the assessments. Not only do we have a duty to the next generation to protect the environment, reduce carbon, and stop climate change, but also to minimise the financial burden that we give them. We believe that the values of the costs to customers' bills over the period to, say, 2100 (as covered in Regional Plans) as a result of the construction of a Strategic Source should be covered in the reports required for Gate 3.

2.2 **Fragmentation of Strategies**

Many of the capital projects assessed in the Draft Decisions are interconnected. The Thames Water to Southern Water Transfer can't proceed without either the SESRO or the STT being in place. The Severn Thames Transfer is interconnected with the Minworth SRO and the Severn Trent Sources and any overall comparison of the strategies is therefore impossible.

The carbon footprint, financial cost, return on value, cost to the consumer, recreation and amenity value, and environmental impact of any integrated solution is impossible to define from the fragmentation of the strategies. Although there is some detail available to justify the strategic options, there are no option comparisons to justify the selection of options and their sequence of development.

2.3 **Inappropriate Forecasts**

Many of the projects are only justified on the basis of outdated (and inflated) population forecasts, over-estimates of the abstraction reduction required from chalk streams (which are more realistically estimated in the report produced by Chalk Streams First) and the bias of water companies in favour of capital-intensive projects. Adaptability is key to ensuring that capital projects are incremental and can be implemented to meet actual demand not inappropriate and inaccurate projections.

2.4 **GARD Proposals**

We support the Group Against Reservoir Development proposal that the STT transfer aqueduct should be built as quickly as possible, initially with only a modest amount of support sources, but with the capability of adding new sources if needed.
The first phase of the scheme to provide water to the South East Region should comprise the 300 Ml/d STT (not the 500Ml/d in the current plans), based on support from Netheridge and both phases of the 115 Ml/d support from treated Minworth WWTW effluent. This would give a deployable output of 195 Ml/d using Thames Water's own figures.

But given Thames Waters record of not achieving leakage and household usage reduction targets they propose the following schemes should go ahead, even if not strictly needed.

By early 2030s:

- The Teddington DRA scheme (67 Ml/d), already planned to be due by 2031
- The first phase of the GUC transfer (50 Ml/d), already planned to be due by 2031
- The 50 Ml/d Thames to Affinity transfer to allow early chalk stream relief

By 2035/36:

- 1st phase of Severn-Thames transfer, only 300 or 400 Ml/d aqueduct, with Netheridge and, possibly, Minworth support
- 2nd phase of GUC transfer, or possibly included in the first phase GUC transfer

Thus about 300-400 Ml/d of 'over-provision' would be deployed early to bring forward environmental benefit, including lower priority abstraction reductions, and to provide a large 'hedge' against climate change or population growth being substantially higher than the ONS forecasts.

3. The 'Draft Decisions' on the Strategic Resource Options

3.1 **SESRO**

3.1.1 **Water Quality**

The first paragraph of 2.1 of your document states that the SESRO is a raw water storage option in the upper catchment of the River Thames.
Given that our local sewage works (along with most of the other works in this part of Oxfordshire) regularly dumps raw sewage into the rivers and brooks which flow into the upper reaches of the Thames, and that the worst months for sewage pollution in the Thames are exactly those winter months when it is envisaged that the reservoir will be refilled, there is a risk of the reservoir being filled with water of highly unsatisfactory quality. We do not like the idea of living close to a large pool of diluted untreated sewage.
There is nothing in Thames Waters Plans relating to the upgrade of our sewage works, yet major house building projects in the area continue unabated.
The Environmental Assessment Report (EAR) released for Gate 1 recognised the danger of poor water quality in the reservoir, especially algal growth, and the potential impact from regulation water releases. The conclusions in Section 6.5 of the EAR state that:
'Current nutrients levels in the River Thames are likely to result in algal growth within SESRO. In addition there is a further risk of nutrients added by wildfowl. Engineered mitigation measures such as artificial mixing, Intermittent artificial mixing, Microfiltration & Surface Skimmers, Draw-off Control (Variable Draw-off) and

sonification should be considered".
We have seen nothing since which allays our concerns.
This is unacceptable and the possible impact of algal laden-reservoir releases is a major issue which should have been addressed prior to Gate 2.
Allowing this to continue without this issue being resolved is simply pushing the problem down the road.

3.1.2 **Demand**

Population forecasts in the Water Resources South East (WRSE) Plan are overstated and do not take account of the latest government projections which show the slower growth in UK population, so planning for a huge increase in demand doesn't make sense.

Using forecasts based on ONS 2014 when ONS 2021 is available also doesn't make sense.

Thames Water loses through leakage 24% of all of the water that is taken from the environment yet only plans to reduce the leakage outside London by 27%. They should be forced to meet the government target for leakage reduction across its entire network (not just London).

Thames Water also plans to reduce demand per household to 123 litres not to the Government target of 110 litres, why is this acceptable?

The Government requires drought resilience but relying on the SESRO means that this will not be achieved until at least 2040, why is this acceptable?

3.1.3 **Not a new water supply**

The construction of the SESRO does not add new water supplies to the South East. Flow records show it would have been impossible to fill the SESRO between May 1975 and December 1976 (the '1976 Drought') so in a similar period in the future it would be a huge white elephant and of no use whatsoever. We understand that GARD will be submitting to RAPID a list of errors and unwise choices made by Thames Water in calculating the amount of water which could be supplied by SESRO in an extreme drought.

3.1.4 **Financial Impact**

GARD's research show the Oxfordshire reservoir is worth £4.8 Billion to its owners in increased water bills out to 2080. The regulatory regime however does nothing to similarly encourage investment in the repair of ageing infrastructure. Were Thames Water to reduce leakage to national target levels by 2050, this would deliver more water than this proposed reservoir.

3.1.5 **Environmental and Social Impact**

Thames Water suggests that the Leisure and Amenity possibilities of the new reservoir have a 'Major Beneficial' rating, but does not explain how this would be achieved. We understand that the 'new' recreation opportunities which the reservoir could bring would be water-based but given that this will be "raw" water (containing diluted sewage), we are very uncertain about the viability of leisure facilities in this environment.
As has been raised many times by many of our fellow groups of residents, yet still to be

acknowledged by Thames Water, water-based leisure activities may be severely curtailed by:

- Significant coverage by solar panels. These are not new and cannot be considered a benefit, as they simply replace existing solar farms which will have to be removed.
- Security issues that may limit general public access to the area.
- Concerns over the introduction of invasive species.

Given that the recreational benefits of the reservoir seem to be such a large part of the justification for building a bunded reservoir here, it seems that to get past Gate 2 without any detail of how these will be introduced places significant doubt on the ability of the SESRO to deliver recreation, attracting development and increasing tourism potential in the local and wider area

3.1.6 **Landscape impacts**

We note that the Terrestrial Environmental Appraisal Report included as part of the Gate 2 submission points out that the landscape character of the AONB would be eroded as the views from and towards the AONB form an important, valued aesthetic component of the AONB but that this seems to be of no import to the Water Companies or their regulators.

It also suggests that there would be positive contributions to the landscape character within the floodplain – given that most of the flood plain will be covered in "raw" water (containing diluted sewage), we do not understand what this will be.
The reservoir would be the largest thing in the Vale of the White Horse and could have a significant effect on the lives of the 50,000 residents who live here.
No mention is made of the impact of the very high volume of housing development taking place in the villages around the edge of the proposed reservoir or the many thousands of new homes planned and being built in the rest of the OX12 postcode area.
The area that Thames Water identified 25 years ago as being suitable for a reservoir with a sparsely populated area, with only a couple of small villages to be affected has gone. In its place is an area crammed with some of the most intense levels of housebuilding in England. The eastern boundary is the A34, now one of the busiest roads in the UK and already at or over capacity.

We also note that Figure 1.1: Schematic Representation of 150 Mm^3 SESRO variant on page 7 of the submitted Concept Design Report appears to suggest that East Hanney lies to the west of the Letcombe Brook, whereas it is mainly to the east of this chalk stream on both sides of the A338 and very close to the 'wetland habitat' shown in this schematic.

The actions to be addressed in the Gate 3 Submission refer only to reviewing and updating the landscape and visual impact assessment (LVIA) methodology with Natural England not with the people most affected by the reservoir, including those whose homes may lie within a few metres of the 'wetland habitat'.

3.1.7 **Reliability and adaptability**

We note that there is no reference to reliability or adaptability in the draft decision document. We assume that this means that it is accepted that the SESRO cannot be considered as adaptable?
The plan is not adaptive – the Severn Thames Transfer pipeline would be much more flexible to changes in demand and changing population need and should be built first,

and in stages, before the reservoir, given the variations in population forecasts in the last few years.
An infrastructure project of this scale is not very adaptable. Unlike flooding a valley, this huge construction would take as long to remove as to install and the cost of removal would be similar to the cost of construction. The consequential damage to the area cannot be undone, without huge cost, once construction has started.

3.1.8 **Impact on flooding**

We have two types of clay subsoil in the Vale of the White Horse (which are relatively impermeable) and greensand which is very permeable. Part of the reservoir will be built over greensand so would be taking away over one square mile of the land that soaks up flood water which may increase the flood risk in the rest of the Vale.
The weight of the water on the substrata could also affect the water table in the surrounding area. Equally important, if water from the reservoir could leak into the greensand below it, it could create a river leading straight to Steventon, Drayton and Abingdon and on into the Thames.
As far as we know, Thames Water have not yet done any detailed designs to show the extent of these flooding and leakage risks, and how they could mitigate them.

The Concept Design Report included in the Gate 2 Submission states that the reservoir would lead to the loss of flood plain, and therefore the reservoir may contribute to flood risk. This includes impacts to water bodies to the north such as Hanney Ditch, Childrey Brook and the River Ock. However, compensation measures would be implemented to minimise effects. It goes on to say that in operation, the presence of the reservoir would create a small reduction in potential flood flow under the A34 into Abingdon.
Yet in the reports prepared for Thames Water, supporting the WRMP19 submission, the reservoirs above 75 Mm^3 in size received a 'Red' rating as it was stated that there was insufficient flood storage area on the reservoir site to compensate for the loss of floodplain.
It is notable that, the 'new' flood characteristics are in part attributed to '…rain falling on the reservoir surface area being removed from the Ock catchment'. This rainfall was an entirely negligible factor in the 2007 flooding of the villages (especially East Hanney and Steventon) around the reservoir's edge, and it is highly likely that, with East Hanney's floodplain in particular being sealed by the reservoir footprint, any future flooding of the villages would be much worse.

We do not believe that plans for the reservoir are credible. Only now are our residents in the area around the proposed reservoir site being asked to give access to agents of Thames Water to allow them to establish the characteristics of the surrounding ground, the water table, and especially the local watercourses, which could be affected if the reservoir is built.
Surely if these plans have been in formulation for 25 years, this work should have been done long ago?

3.1.9 **Financial Impact**

All water companies have a statutory right to make a real return on Regulated Capital Value in all future years and all of the projects in these draft decisions are Capital

projects and will therefore increase the Regulated Capital Value, so all projects carry an automatic right to improve shareholder returns.

GARD created a financial model using cost and other data contained in the RAPID Gate 2 document for the SESRO and the Thames Water draft plan. The model also used data from the Competition and Markets Authority's (CMA) determination on the elements of WACC.
This model estimated that the increase in Shareholder Value that would immediately arise and benefit the shareholders in the three water companies who would jointly own the reservoir if the 100 Mm^3 SESRO were to be given the go ahead (Thames Water, Affinity Water and Southern Water), would be £846 million. This arises from the return on the increase in Regulated Capital Value resulting from the £1,878 million capital expenditure on the reservoir, and discounted back to the present.

If the same amount (£1,878 million) was spent on non-capital projects such as reducing leakage and to reduce demand, there would be no return to the shareholders, but this money still has to be spent at a cost to the consumers.

Therefore, the incentive to the Water Companies to build capital intensive projects instead of focusing on maintaining and improving existing infrastructure is huge and also a huge cost to consumers.

We strongly support GARD's request for inclusion of the financial effects of RCV in the 'Inter-generational Equity' (IGEQ) metric for all projects in Gate 3.

3.2 Thames Water to Affinity Water Transfer

3.2.1 Not Dependent on the SESRO

The Draft Decision states that you have concluded that the Lower Thames Reservoir (LTR) option (a transfer from Thames Water's Lower Thames Reservoir system to Affinity Water, supported by new water resource from the SESRO) should progress through the gated process to gate three.
We do not believe that LTR is dependent on the SESRO as we explain below.

3.2.2 Source of Water

The Group Against Reservoir Development (GARD), and the Chalk Streams First grouping believe that the source of water for the Thames to Affinity transfer should be a direct connection to Thames Water's London supply system, via an existing reservoir, probably the Queen Mary reservoir. The 50 Ml/d transfer to Affinity would become an additional 50 Ml/d demand on London's supply system. The existing reservoir system can provide support to the natural River Thames flows when needed in a drought, as it does for all other demands on the London supply system and by then the demand on London's supplies will have been reduced by about 100 Ml/d due to Thames Water's planned leakage and PCC reductions. Therefore there will be no need for additional London storage.

As there will be additional 67 Ml/d of deployable output from the planned Teddington DRA scheme, there will be no need for any water from SESRO or the STT.

GARD also believe that all Affinity Water customer's needs to 2075 could be met by a 50 Ml/d T2AT combined with the Grand Union Canal transfer and metering to achieve the Government's 110 l/p/day PCC target.

3.2.3 **Chalk Streams**

The submitted Concept Design Report states that the LTR option is compatible with the water resources management concept proposed by Chalk-Streams First initiative. Yet in Chalk-Streams First's latest report they propose that the reductions can be achieved within 10 years without needing to wait for any major new sources, taking account of much higher deployable output recovery for the London reservoirs, so that the LTR is not dependent on the SESRO.
They have a strong preference for options that can be delivered quickly to enable the planned reductions in the Chilterns chalk streams to be in operation within the next 10 years (without waiting for the SESRO).

When the T2AT transfer comes into operation in the early 2030s this would allow all the planned upper Colne/Lea chalk stream reductions to be in place.
The Chalk Streams First report on re-naturalising chalk stream flows showed deployable output recovery should be around 60% of the abstraction reductions and not the 17% assumed in Thames Water and Affinity Water's plans. This substantially reduces the Thames to Affinity transfer's net demand on London's supply system.

Therefore, the SESRO is not a requirement for the LTR to proceed.

3.3 **Thames Water to Southern Water Transfer**

3.3.1 ***Why is this needed?***

The Gate 2 submission for the Thames Water to Southern Water Transfer (T2ST) states that this is a long-term resilience option that could form a key strategic link within the South East region. T2ST would enable available water from Thames Water's Swindon and Oxfordshire (SWOX) water resource zone in Oxfordshire to be transferred to Southern Water's Hampshire area.
The preferred options (there are two alternative pipeline corridors) would transfer water from SESRO and/or STT, treated to potable standards by a new treatment works west of the A34 at Drayton (built as part of the SESRO infrastructure), and then pumped via a pipeline through parts of Oxfordshire and Berkshire to Southern Water operational sites in Hampshire.

The document states that T2ST, is required as a result of abstraction reductions planned to deliver additional environmental protection. Yet the Chalk Streams Catchment Based Approach (CaBA) report concluded that no groundwater abstraction reductions were needed in the Itchen and Test catchments.
For both rivers, licensed abstraction is less than 10% of average recharge (the CaBA group proposed benchmark for acceptable abstraction).
Therefore, the 59 Ml/d of deployable output loss planned for Test and Itchen groundwater sources is un-necessary and should be dropped, or at the very least, be given a low priority.

The submission also states that the need and timing of T2ST will also depend on other schemes within Southern Water's supply area, including the AMP7/8 Water for Life Hampshire schemes and the Hampshire Water Transfer and Water Recycling Strategic Resource Option (SRO) scheme and that the utilisation of the T2ST during drought events will be provided after Gate 2.

Therefore, at the current time, the requirement for this option does not appear to be proven.

3.4 River Severn to River Thames Transfer (STT)

3.4.1 A 'Potentially Valuable Way of Supplying Water'.

We are pleased to see that in the Draft Decision Document relating to the STT it states that 'the evidence suggests that the solution is a potentially valuable way of supplying water to customers'. We support this statement for the reasons shown below.

It should be recognised that there is a strategic need to transfer water from the relatively wetter and less populated north and west of the country to the dry and heavily populated South East. This need has been a primary conclusion of every strategic water resource study of the past 50 years including the strategies of the Water Resources Board in the early 1970s, the National Rivers Authority in 1994, Water UK in 2016 and the National Infrastructure Commission in 2018.

3.4.2 Demand

As stated in paragraph 3.1.2, we believe that the demand forecasts used by WRSE are overstated because population forecasts are out of date and Thames Water targets for leakage reduction and household demand do not meet government targets.

The estimates for reductions in chalk stream extraction are also overstated so the only possible period where there might be a requirement for water to meet the 1 in 500 resilience target would be prior to 2040. The only way of meeting this demand in the South East would be through the use of the first phase of the SST as there is no possibility of any 'new' water from any other source.

The presence of the Severn to Thames transfer from the early 2030s would allow additional support sources to be added relatively quickly, if needed, especially if Thames Water and/or Affinity Water fail to meet the targets for reducing leakage or reducing household demand.

GARD believe that neither SESRO nor the STT is required to meet the needs of London and Affinity Water, if even only the low leakage reductions in Thames Water's draft plan are achieved (without them having to meet the government target) as long as they also achieve the government target for household water usage. This is without any allowance being made for additional recovery of deployable output from enhanced chalk stream flows as detailed above.

However, GARD recognises that there is uncertainty over the amount and timing of the leakage and PCC reductions, mainly arising from the performance of Thames Water in meeting targets in the past. Therefore, it could be prudent to provide extra supply capacity to the London and the Thames valley as early as possible. This has the maximum strategic, environmental and drought resilience impact and would give a cushion against accelerating climate change effects. It would also bring forward the date at which 'true' 1 in 500 year drought resilience can be guaranteed (not done until post-2040 in Thames Water's plan using the SESRO).

3.4.3 **Adaptability**

The STT pipeline would be much more flexible to changes in demand and changing population need and should be built first before the SESRO given the very large changes in population forecasts in the last few years and the high likelihood that the demand forecasts are vastly overstated.
We quote Thames Water "STT provides a modular, adaptable source of water, whereby water from support sources can be introduced as and when necessary, rather than being relied upon to provide a large 'baseload' source".

The National Infrastructure Commission's report in 2018 advocated that priority should be given to water transfers such as the STT. This is cheaper, faster, more environmentally friendly and most importantly is adaptive both in terms of managing water flows and in terms of graduated investment options. The pipelines needed for the National Water Grid, such as the STT and its associated transfers from water-rich areas can be scaled up or down even when the project is well advanced.

We believe that this should be given priority over the development of the SESRO as it provides a much more adaptable solution which can respond to the level of demand.

3.4.4 **Sweetening Flow**

The Gate 2 Submission for the STT refers to the minimum or "sweetening" flow required to ensure efficient and effective operation of the Interconnector and to avoid stagnation of the water. It states that as the unsupported flow is not always guaranteed, the Netheridge support flow has been selected as the sweetening flow source providing 20 million litres per day. It is important to note that this support would only be needed in extreme drought conditions, as overwhelmingly, the unsupported Severn flow is sufficient to meet this small extraction requirement.

3.5 **Minworth SRO**

3.5.1 **Robust and reliable source of raw water but impossible to evaluate**

The Gate 2 Submission for the Minworth Strategic Resource Option (SRO) states that this is a viable solution that offers a robust and reliable source of raw water support to the Grand Union Canal SRO, and the Severn Thames Transfer SRO.
Minworth SRO will be the sole source of raw water to support a new abstraction for the Grand Union Canal SRO. Minworth SRO will also be one of several sources of raw water support for a new abstraction for the STT SRO system. Therefore, it has to be included in the assessment of either of the options.
The evaluation for this project is being performed by three separate projects (Severn Thames Transfer, the Minworth Water Treatment Works Study and the Severn-Trent 'strategic sources' study), therefore the options and benefits are difficult to assess objectively.

3.5.2 **Integration of Models**

Minworth SRO will be the sole source of raw water to support a new abstraction for the Grand Union Canal SRO. Minworth SRO will also be one of several sources of raw water support for a new abstraction for the STT SRO system. Therefore, it has to be included in the assessment of both of the options.
The evaluation for this project is being performed by three separate projects (Severn Thames Transfer, the Minworth Water Treatment Works Study and the Severn-Trent 'strategic sources' study), therefore the options and benefits are difficult to assess

objectively.
The Gate 2 Draft Decisions Document notes that there is a need to ensure integration of models accounting for climate change is 'compatible' and that the 'in combination and cumulative assessments should be expanded to include other plans, permissions and projects with the sector and within other sectors'.
Thus confirming the need for project integration for objective assessment.

3.6 **Severn Trent Sources**

3.6.1 **Part of the STT SRO**

As the Gate 2 Draft Decision document states 'the Severn Trent Sources (STS) uses treated final effluent from Netheridge wastewater treatment works at a location near to Deerhurst, currently identified as Haw Bridge. This will provide raw water support to the Severn to Thames Transfer (STT). STT will abstract the same volume of water and transfer it to the River Thames. The solution forms part of the wider River Severn to River Thames Transfer system composed of STS River Severn to River Thames Transfer (STT) and North West Transfer (NWT)'.
This water would normally be discharged into the River Severn and effectively wasted.
The document also states that 'There is insufficient evidence to determine whether the solution has the potential to provide similar or better value compared to other options. The best value decision making and justification for solution option selection and timing is not clearly presented. There is insufficient evidence to determine whether Severn Trent Water have considered a wide range of metrics, risks and values supported by data, analysis and customer/stakeholder support.
The Gate 2 Submission states that 'In terms of raw water support to the wider STW region, Netheridge WwTW is of limited value, due to its location close to the southern boundary of the region and at the foot of the River Severn catchment. STS SRO will discharge a volume of treated final effluent to a location near to Deerhurst, currently identified as Haw Bridge. The STT SRO will abstract the same volume of water and transfer it to the River Thames.'

This SRO can not be considered in isolation and can only be reviewed and evaluated as part of the STT solution so we are unclear about its value as a separate decision.

3.7 **Grand Union Canal Transfer (GUC)**

3.7.1 **Supporting Affinity Water Regional Demand**

As the Gate 2 Draft Decision document states 'the Grand Union Canal Transfer utilises the existing canal and a new pipeline to convey raw water from the Minworth solution in the Severn Trent Water supply area to areas of water deficit in Affinity Water's supply area.' Although the GUC transfer is primarily an Affinity Water scheme, Thames Water will benefit from "new water" coming into the lower Thames and Lea via enhanced chalk stream flows, and recovered, treated effluent. The larger versions of the GUC transfer also have the potential for Affinity Water to transfer surplus water to Thames Water.

3.7.2 Although our analysis shows that a 50 Ml/d GUC transfer would be more than enough for Affinity Water's needs and re-naturalising chalk stream flows, there would be additional security of supplies for both Affinity and Thames Water, if the GUC carrying capacity can be increased to 100 Ml/d at relatively little additional capital cost, via the 'Phase 2' of the scheme for completion by 2035.