



Water Resources Stakeholder Forum, 11 May 2015

Note of meeting

1. Welcome and Introductions

Richard Aylard welcomed everyone to the meeting. Richard highlighted some of the key developments since the January forum including the establishment of Ofwat's resilience working group and the strategic work on infrastructure with the GLA.

Richard also emphasised the importance of engagement with stakeholders in helping to shape our plans and activities, and sought comments and feedback from attendees on how we can improve our current approaches.

2. Perspectives from the Environment Agency

Trevor Bishop, Deputy Director of Water, Land and Biodiversity at the Environment Agency (EA) presented their perspective on water resources, and also the role of regional planning and specifically the role of the Water Resources in the South-East Group (WRSE). Some key points from Trevor's presentations are noted below:

- The Water Bill, which received royal assent in May 2014, facilitated the development of 2 important areas namely, market reform and competition, and resilience.
- The EA is involved in a Government led strategic infrastructure review which is looking at resilience in a number of areas including energy, water and food and aims to ensure a more integrated approach.
- Abstraction reform is a major plank of Government policy on water resources, it aims to manage access to water in a more dynamic way. The new approach is likely to present a significant challenge to water companies.
- WRSE is a non-statutory organisation, it has a number of members who have agreed a Memorandum of Understanding (MoU) but it is an open forum and interested organisations are able to participate in the group.
- An important objective of WRSE is to achieve a shift from least cost and "just in time" resource planning, to take account of future uncertainties such as climate change, the impact of market reform, policy changes such as abstraction reform and to ensure a longer term perspective is adopted to achieve resilient water supplies.

Questions following Trevor's session

Q1: GARD asked how the structural changes in the EA will impact on their ability to perform their duties.

A1: Trevor explained how the EA, like all government bodies, has been subject to efficiencies. Trevor explained that the cuts from Government were as a result of a reduced Grant in Aid budget (GIA) and as the water resources function is funded from charges from abstractors there will be less impact.

Q2: TRT asked how strategic initiatives will work with competition?

A2: Trevor emphasised that security of supply and resilience are essential in the reform and that further work on the detail is required.

Q3: TRT asked how with reduced resources, and pressures from other bodies across government, will the EA be able to perform its duties to protect water resources, in particular there is a threat of

hydropower development from DECC, the presumption for sustainable development from CLG and the Defra review of an EA merger with Historic England.

A3: Trevor explained that the EA has a duty to facilitate growth, and as such it has to find a balance between protection and development, with hydropower being an example.

Q4: ICE commented on the leakage per person figures and asked if the method for measurement used was new and how Thames Water performs using this metric.

A4: Trevor responded that there are a number of metrics used to monitor and report performance on leakage. Companies performance can appear to be better/worse relative to others depending on the metric.

Q5: WWF asked a question about the political appetite for abstraction reform.

A6: Trevor thought that abstraction reform could have cross party support.

3. Large water resource supply options

Richard Smith outlined the 4-phase programme of work to review and develop large water resource supply options (>50 MI/d). Phase 1 has involved the identification of potential new options, and the review and screening out of options which, whilst feasible, do not represent best value. TW has engaged with stakeholders throughout Phase 1 and incorporated their feedback into each stage of the work. Richard presented the output of the screening assessments for specific options and summarised the options that are being taken forward. A summary paper and the full report are also available on the website www.thameswater.co.uk/wrmp. This information was reviewed in the breakout session.

The next phase of the programme, Phase 2, involves further studies and investigations to i) finalise and validate screening decisions pending or made in Phase 1 and ii) to look at uncertainties around specific options. This information was covered at a high level in the breakout session and a technical meeting is planned for 13 July 2015 to discuss Phase 2 and the specific investigations in more detail.

The same approach is now being undertaken for small resource options < 50 MI/d. This work will also be presented at the technical meeting on the 13 July.

TW explained that all the work on the resource options needs to be complete by June 2017 to enable consideration of the options in the formulation of the plan (WRMP19).

Questions following Richard's session

Q1: ICE asked how WRSE is integrated into this process.

A1: TW explained that it has started work on resource options ahead of WRSE and other water companies but that TW is sharing this work with them to ensure they have an opportunity to input and shape the approach, and ultimately to ensure alignment.

4. Breakout session on water resource supply options

The objectives of the breakout session were to:

- Review and seek any final comments on the output of the Phase 1 screening assessments

- Discuss the proposed Phase 2 further investigations, identify any additional investigations and shape on-going engagement

Overall the screening assessment approach and the output was supported by stakeholders. A summary of the main points raised in the table discussions is provided below, presented by option type. Where a point was raised specifically by one organisation this has been attributed, where there was wider discussion on a point, these comments have been recorded but not attributed.

Option	Status	Discussion
Existing reservoirs	On-going work	<ul style="list-style-type: none"> • TW is examining redevelopment of the existing reservoirs however there are concerns regarding capacity in the system. • WWF suggested geotechnic approaches to patch up the clay.
Tankering	Coarse screening: Screened out	<ul style="list-style-type: none"> • Overall the decision to screen out this option was supported and views were expressed that this was not a cost-effective or long-term option. • Opportunities to use tankers in a severe drought was discussed, an issue raised was the need to provide significant additional infrastructure to pump water from Canvey island. • Scheme costs were clarified to include the refurbishment of tankers and the set up of the port infrastructure. (Tandridge BC) • Opportunities for transfer via Essex and Suffolk Water's network was raised (RSPB). TW explained that this has been looked at however their network is designed to transfer water from west to east. • The option for sharing a tanker option was discussed but it was felt that this was not practical because the infrastructure network does not exist to allow movement of the water to Anglian or Essex and Suffolk Water.
Transfers via the canal network	Coarse screening: Further work	<ul style="list-style-type: none"> • The Canal and River Trust are leading a collaborative study to explore opportunities to use the canal network to facilitate transfers, including the Oxford Canal and the Grand Union Canal. TW is participating in this study. Action: TW to provide details of the study to Severn Trent Water. Done • There was also discussion on who owns the entirety of the canal network that would be used. • The potential for a hybrid option was raised whereby extra capacity in the Thames basin could be connected to the Severn basin (WWF).
Direct non potable reuse / greywater reuse	Coarse screening: Further work	<ul style="list-style-type: none"> • TW is developing a pilot study in collaboration with GLA and developers to understand the costs, benefits and risks associated with installing a dual supply network in new housing developments. STW offered to share a pilot underway with 20-30 properties in Wolverhampton. Albion Water also has completed work in this area. • RSPB raised this as an area of interest and supports further work.
Lower Lee	Fine screening: Screened out	<ul style="list-style-type: none"> • This option has been screened out due to complex and costly treatment required to address the poor water quality. • ICE suggested that this option may be worth revisiting once Deephams STW standards have been tightened and the local water quality subsequently improved. There was also debate on contamination in the sediment.

		<ul style="list-style-type: none"> TRT asked if the sustainability reductions (SRs) on the Lower Lee would potentially affect the option. TW explained that whilst the Lee investigation was on-going, it was unlikely that abstractions would reduce as there are few flow dependent reaches and abstraction reduction is unlikely to be cost beneficial.
Unsupported transfers	Fine screening: Screened out	<ul style="list-style-type: none"> The unsupported transfer relies on available flow in the River Severn. TW considers this to be high risk in view of climate change and therefore proposed to screen out this option in preference to supported options. TW has been challenged on this decision and therefore further studies are underway to look at the flow sequences, impacts of climate change, a more extended library of droughts generated using a stochastic approach. Cotswold Rivers Trust questioned what benefits this options could provide for the River Thames. GARD agreed that it is more practical to have a more reliable option.
Desalination	Fine screening : TBC	<ul style="list-style-type: none"> TW explained that the preferred option would be another plant at Beckton STW as desalination south of the estuary is too expensive. TW explained that reuse is preferred to desalination due to costs but TW intend to undertake further work to finalise costs specifically for remineralisation. TW also explained that the EA supported the preference for reuse but wanted desalination to be retained as a reserve. GARD proposed that if TW can produce renewable energy (RE) from desalination that this could offset the higher costs. TW disagreed with this and explained that whilst desalination is a good drought option it is significantly more expensive to operate than other schemes even with RE generation. A query was raised that as the technology improves, the cost of desalination would fall, and therefore may become more attractive. TW explained that desalination exposes the business to energy costs.
Supported transfers	<p>Longdon Marsh (LM) screened out.</p> <p>Commercial transfer agreements with UU and STW taken forwards</p>	<p>Longdon Marsh</p> <ul style="list-style-type: none"> STW asked if LM could also be used for flood mitigation. TW view is that during times of flood the reservoir would be at full capacity and therefore would not serve as a food defence tool, in addition there would be very high risk from filling it at such a high rate. Also it would not provide flood risk mitigation for two floods in close succession. This was accepted. GARD agreed that this option should be screened out citing that it would be very hard to promote. <p>STW & UU options</p> <ul style="list-style-type: none"> There are a number of variants of these schemes. The STW options include transfer of water from Minworth STW to the River Avon or via Draycote reservoir. Pipeline to Farmoor has been ruled out on cost grounds. TRT asked if WFD assessments had been completed particularly deterioration on the River Trent. This was recognised to be an issue which would need to be addressed. STW proposed that there may be a better hybrid scheme between

		<p>STW and UU. TW agreed to continue discussions on this.</p> <ul style="list-style-type: none"> It was agreed that the studies to understand potential WQ and ecology issues associated with water transfers from the Severn to Thames need to be concluded before this option can be progressed. <p>Other issues raised and work required:</p> <ul style="list-style-type: none"> Engagement with Welsh Government Implications for urban centres in NW (HE) Extent of usage by TW and resilience of Lake Vyrnwy (RSPB) Balance of the requirements of the WFD , with the option chosen, and customer affordability. Commercial arrangements Water quality and ecology implications of releasing further water into Lake Vyrnwy. <p>The RSPB questioned the reliability of the Lake Vyrnwy option for supply during a long drought and stated that Lake Vyrnwy was frequently drawn down in short duration droughts, exposing the village at low water levels.</p>
Reservoirs	Fine screening: Chinnor and Longworth screened out. Abingdon taken forwards	<ul style="list-style-type: none"> TW explained that Chinnor and Longworth have been screened out due to relative cost compared to Abingdon. This was understood by stakeholders. GARD queried whether TW has addressed risks identified on Abingdon i.e. fill strategy, transfer tunnel. TW stated that this work would need to be covered in the Phase 2 investigations. Need to explore multiple benefits of a reservoir were also raised including flood mitigation Predictions for growth was raised (SODC). TW explained the basis for forecasts and the work planned to review the forecasts. WWF proposed that a combined Severn Thames transfer with new storage reservoir option in the Thames catchment providing additional capacity to store the transferred water would provide a more resilient supply option.
Reuse	Fine screening: Abbey Mills screened out Mogden under discussion with EA Deephams and Beckton taken forwards	<ul style="list-style-type: none"> Stakeholders did not raise any specific issues or concerns with the decisions taken on the reuse options. Questions were raised re customer acceptability (CCWater) and TW confirmed further work is required.
Phase 2 investigations		<ul style="list-style-type: none"> A consistent point of contact was requested (SODC). TW confirm that on water resource matters this is Lesley.tait@thameswater.co.uk and on planning issues, this is mark.matthews@thameswater.co.uk Level s of optimism bias was raised (Swindon BC). TW confirmed that it is referring both to Treasury Green Book and our own major projects. Tactics to deal with growth was raised (SODC).

4. Update on water resources projects

Chris Lambert and Steve Tuck provided an update on a number of the water resources projects. Specific updates included:

- TW has committed to undertake a number of low flow studies, the largest of which is an investigation on the Lower Lee. Cascade has been appointed to undertake the scoping stage of this investigation. The full investigation will follow completion of the scoping stage. To date the objectives have been defined, the hydrology, water quality, ecology and morphology data have been reviewed, and sites important for nature conservation within 5 km of the main River Lee network have been identified. Further work is planned to add non-designated sites. A stakeholder meeting will be held in July.
- TW use a planning model called WARMS2 to understand resource availability. The model is undergoing review and refinement, this includes assessment of the output of some schemes and the resource impact of the River Mole and Moseley Weir fish pass. There will be further consultation with stakeholders in summer as part of the refinement of the tool.
- Also, with the support of GARD, TW has appointed a consultant to undertake an independent review of GARD's hydrological modelling tools. To date this work has shown that the base case flow of the model is reasonably robust however outside these specific calibrated conditions there are variations which need further work to fully understand them.
- There have been some significant increases in population forecasts since TW published WRMP14. In the short term TW expect to be able to manage resources to meet demand, bringing forward development if required however in the longer term population growth is a significant factor. TW is undertaking a pilot study to trial new forecasting methodologies and the EA is leading an UKWir project to update methodologies for population and household forecasts for WRMP19. These workstreams will form a key building block in the formation of our next plan.
- Studies are underway to examine the Severn to Thames transfers (STTs) focused on the water quality and ecology investigation and flow. A technical stakeholder meeting was held on the 6 May 2015 to present and seek feedback on the work completed to date. The minutes of this meeting have been published on TWs website www.thameswater.co.uk/wrmp.
- There are a wide range of future uncertainties which are not currently considered in the existing WRMP decision making methodology and guideline and these need to be taken into account in the formulation our long-term plan. TW is currently examining a range of tools which could potentially help to improve current methods including:
 - Real Options, which has been used by the EA in flood management work;
 - Multi-criteria analysis which enables performance against a wider range of criteria to be considered in the formulation of the long term strategy; and

- Adaptation pathways which considers a wide variety of futures and how a strategy may perform against those futures.

We will continue to explore these tools and will present further information at a future Forum to seek comments and feedback.

- In addition to the updates provided above, TW highlighted the wide number of studies being led by the EA and UKWir to improve technical methods and approaches and which will shape the revision of the Water Resources Planning Guideline (WRPG).

Questions and discussion

Vale of White Horse District Council: Has the EA commented on the most recent population projections?

TW response: We have discussed the projections with the EA and outlined that in our view, the increases projected in the short term can be accommodated within our plans and mitigating measures, however the increases in the longer term are significant. The EA are currently reviewing the data.

TRT: Do you think that you have done enough with the EA on flood defence plans, also are the plans dovetailed with the RBMPs?

TW response: TW is now working with the EA to improve alignment between resource planning and flood management plans. Specific schemes which have been discussed are the Oxford, Abingdon and Lower Thames potential river flood defence schemes.

Albion Water: What is the process and timescale to review smaller resource options?

TW response: The process to review small options will mirror the process applied for large resource options. Work is in progress and this will be presented at the technical stakeholder meeting to be held on 13 July.

WWF: Are we undertaking monitoring to understand the benefits and costs for changes in abstraction licences?

TW response: We are not funded to monitor these schemes but consider it is vitally important to understand the costs and benefits and undertake quantitative evaluation to provide an evidence base.

Dates of forthcoming meetings:

July 2015 (date tbc): Lower Lee investigation

13 July 2015: Technical stakeholder meeting on water resource options. This meeting will cover the review and screening of small resource options < 50 Ml/d and the Phase 2 investigations. The meeting will be held in Reading. Please put this date in your diaries. Invites will be sent in June. Please contact Lesley Tait if you would like to attend this meeting Lesley.tait@thameswater.co.uk

7 September 2015: Stakeholder forum to be held in Paddington, London. Please put this date in your diaries. Invites and further details of the meeting will be sent in July.

End

Attendees:

Name	Organisation
John Beatty	Cotswold Canals Trust
Trevor Bishop	Environment Agency
Philip Burston	RSPB
Peter Canavan	South Oxfordshire District Council
Trevor Cramphorn	Costwolds Rivers Trust
Colin Fenn	WWF
Tora Hallatt	Environment Agency
Kim Harding	Hertfordshire County Council
Bill Hume-Smith	Mott Macdonald
Malcolm Jeffery	Albion Water
Gwilliam Lloyd	Swindon Borough Council
Ana-Maria Millan-Villanecia	Consumer Council for Water
Minnie Ngaluafe	Tandridge District Council
Tom Ormesher	NFU South East
Martin Pilbin	RWE Npower
Clare Roberts	Vale of White Horse District Council
Topsy Rudd	Cascade Consulting
Rob Sage	Affinity Water
Pat Spain	Severn Trent Water
Peter Spillett	Thames Rivers Trust (TRT)
Nick Thompson	Group Against Reservoir Development (GARD)
Rebecca Tibbetts	Natural England
Sarah Wardell	Environment Agency (EA)
Dave Wardle	ICE

Apologies:

Name	Organisation
Jon Ashley	Ofwat
Richard Blackwell	United Utilities
Dave Cook	Wilts and Berks Canal Trust
Amanda Dunn	East Hampshire District Council
Joanna Killian	Essex County Council
Martin Lunn	Essex and Suffolk Water
John Mitchinson	Redbridge BC
Alex Nickson	GLA
Henry Oliver	North Wessex Downs Area of Outstanding Natural Beauty
Helen Spring	LWT
Andrew Stevenson	East Hertfordshire District Council