

Water Resources Stakeholder Forum, 7 September 2015

Note of meeting

1. Welcome and Introductions

Richard Aylard welcomed everyone to the meeting and highlighted some of the key developments since the forum held in May including:

- technical stakeholder meetings have been held on the work to review small resource options and the programme of further investigations on large resource options, and the Lower Lee investigation;
- developments to the planning frameworks for the Drought Plan and the Water Resources Management Plan; and
- the consultation led by Ofwat on resilience.

Richard also emphasised the importance of engagement with stakeholders in helping to shape our plans, and sought comments and feedback from attendees on the topics that they would like covered at future meetings and also comments on how we can improve our engagement approaches.

2. Programme appraisal and decision making tools

Chris Lambert (TW), Ben Piper (Atkins) and Professor Julien Harou (University of Manchester) presented on programme appraisal and decision making tools. The presentations covered the approach used in TW's Water Resources Management Plan 2014 (WRMP14), shortcomings of the approach and the methods set out in the Water Resources Planning Guidelines, and work to examine new decision making tools and methods. Key points from the presentations are noted below, followed by points raised in discussion.

- The programme appraisal methodology used in water resource planning has been in place for some time and essentially focuses on determining the least cost solution and then shaping this via expert judgement to take account of wider considerations.
- There are shortcomings with the approach, and it is recognised that it needs to develop to help determine the best value programme that is robust and resilient to a variety of futures.
- This development work is currently underway at an industry level, via UKWIR¹, supported by a number of projects led by individual companies, including Thames Water, to develop improved approaches. The expectation is to develop an approach that considers multiple dimensions and enables the 'best value' programme to be selected, trading off cost and performance, and in the context of the many uncertain but plausible future scenarios.
- The approach must be clear and transparent such that customers and stakeholders are able to understand and engage with the process.
- TW has identified 7 aspects that it considers need to be taken into account in developing the best value programme, these are: cost, flexibility, acceptability, deliverability, impact on the environment, sustainability and resilience. Metrics are in development for each of these aspects. A note on these metrics is provided in Appendix 1. TW will engage with stakeholders as this work progresses and has offered to hold a technical meeting if sufficient number of stakeholders express an interest.
- The UKWIR decision making project is due to complete early 2016 and the output will support the revised Water Resources Planning Guideline (WRPG).

¹ UKWIR: Water Industry research body



Thames Rivers Trust (TRT): Are Thames Water doing similar work to other companies and is there guidance from the EA?

TW: The shortcomings of the current approaches to preparing WRMPs are recognised across the sectors and by the regulators, and there is wide interest in developing the tools and methods. The UKWIR project involves all the water companies and the EA. The companies who are faced with the most significant water resource challenge are unsurprisingly most active in this area.

CPRE: How will you tackle conflicts between objectives within the guidance, for example customer's desire for further leakage reduction whilst the guidelines do not support this where it is not determined to be economic?

TW: The development of metrics which reflect different planning and policy objectives, and the use of these in programme development, will help to highlight and compare the advantages and disadvantages of alternative programmes.

ICE: Metrics are proposed for the environment and sustainability. Is there overlap between these metrics and what is the definition of sustainability?

TW: These metrics are not intended to be duplicative. The proposed components of the sustainability metric include the impact on per capita consumption, leakage and impact on future generations. The environmental metric focuses on the output of the Strategic Environmental Assessment and associated assessments. We welcome further discussion on these with stakeholders.

Consumer Council for Water (CCW): The concept of headroom is difficult to communicate to customers, how will this work be conveyed clearly and effectively to customers?

TW: This is a good point. We need to develop an approach which is understandable and can be clearly communicated to customers. We don't have the answers yet but we recognise the importance of achieving this.

TRT: Are Ofwat engaged with this work and do they participate in the UKWir workshops. Also has there been discussion on potential changes to the Levels of Service?

TW: Ofwat is involved with the UKWIR research work on decision making. There have not been changes to the Levels of Service. Companies are responsible for working with their customers to determine the appropriate Levels of Service but under the Water Act Defra are now able to give direction in this area; however we are yet to find out how they intend to use this.

TRT: Do Ofwat still publish comparisons of company's Levels of Service ?

TW: Ofwat publish less comparison data, this is a function that the Customer Challenge Groups (CCGs) have picked up.

CPRE: The use of multi-criteria analysis has been used across a number of sectors and has built trust with consumers. It is important to work with your customer base and build trust. It would be worthwhile reviewing approaches in other sectors and also consider more innovative methods of engagement such as apps to engage with customers and specifically future customers.

ICE: Adaptation pathways can usefully be used to create agreement on lots of scenarios and to help to identify when decisions need to be made however experience has shown that the political part of decision making can take the most time. How will this be addressed?

GLA disagreed and proposed that one of the benefits of the adaptation pathways is that it stops decisions being put off.

Julien Harou (JH): Scheduling of development will be helped by adaptive planning however it creates a very different solution – where cost is one factor.

GLA: How do you value what future customers will value?

JH: To value and put monetary values on parameters is difficult and stretching this dimension to future customers is therefore even more difficult.

Ben Piper(BP): Historically companies have considered options independently; there is a shift with companies now considering incremental development of options.

GARD: The flexible approach is attractive and could result in different solutions coming forward. Can the Dutch experience (in planning for flood risk) be used in UK privatised water market?

Furthermore the consequences of failure in the Dutch planning framework are severe compared to potential water use restrictions such as hosepipe bans so are these comparable.

JH: The UK water companies don't make decisions on profit only basis – I've looked into this and there's no evidence of this. The national planning process focuses on the national vision.

NOTE: Thames Water and other companies are investigating the adaptive pathways approach used in the Netherlands, and how this could be applied to Water Resources planning.

3. Developments to the planning framework.

Drought Plan

Steve Tuck (TW) gave a short presentation on the Drought Plan explaining the purpose of the plan, the main components of the plan and how it links to the WRMP. Steve also presented an overview of the main proposed changes to the guidelines. These are noted below:

- the guidelines now include the assessment of droughts that are more extreme than those in the historical records and
- the need to define exceptional shortage of rain for each drought permit option.

The implications of these proposed changes is that they will present a clearer articulation of potential risks under extreme events which could impact on the levels of service in the short term and drive additional investment needs.

TW is planning to review and update the current Drought Plan in 2016 with public consultation taking place at the beginning of 2017.

Water Resources Planning Guideline

Tora Hallatt (EA) and Chris Lambert (TW) presented the work underway to review and update the Guideline. Tora explained that the intention is to shorten the guideline, flagging general principles but providing greater flexibility to companies. A new process verification stage has been introduced which enhances the pre-consultation stage with regulators and will determine if methods are fit for purpose. Tora explained that there will be full public consultation on the revised draft guideline in October 2015.

Chris then gave his thoughts on the guidelines from a company perspective. These are summarised below:

- guideline needs to be flexible, recognising that each water company will face very different issues
- the consequences of failure of the water supply system can be just as catastrophic as those linked to flooding. The planning guideline should treat the investment requirements on a similar basis
- climate change and ongoing population growth in the South East mean investment decisions should be taken in a long term context, not just for the next 25 years
- there is a need to consider droughts beyond the historical record. Inclusion of the longer historical record may expose greater risk than previously thought – it is important to avoid a short term reactive response to the increased risk
- customer requirements are very important and willingness to pay should remain an important factor in the decision making process
- monetisation of environmental and social costs do not impact option selection as the discounting process means these costs are relatively small
- given future uncertainties, the adaptability of a scheme is particularly important
- clear guidance on third party scheme requirements is essential to ensure any risk of failure and the associated costs are not passed on to customers.

WWF: Have justified decisions now gone from the guidance?

EA: we always allowed companies to take their own approach; we are now making this more prominent.

TRT: Is there a forward view of the latest climate change forecasts by regulators and water companies.

TW: Work is in progress to develop a different drought forecasting approach using stochastic methods to generate possible future drought scenarios, which does not include climate change. The potential changes that climate change could cause are subsequently added to make these scenarios a more complete assessment of possible futures.

Ofwat: Is there a level playing field for third parties

TW: There are a number of aspects that require clarification including parity between donor and recipient companies for example whether the donor company is subject to the same level of restrictions as the recipient company.

RWE: If the planning timeframe is extended beyond 25 years, are you considering the futures developed by the EA?

TW: We will consider the plan against a range of future forecasts including the EA's future forecasts.

CRT: Under the current system environmental impacts are monetised. How do you propose to do this differently? Do you just make the environment more expensive?

TW: We currently take account of environmental impacts quantitatively through monetisation and qualitatively through the Strategic Environmental Assessment (SEA) which involves expert judgement. There are potentially other methods and metrics that could be used, such as the frequency that rivers flow below specified limits, we are considering these and will consult with stakeholders during this process.

4. Update on current projects

Resource Options

Richard Smith presented an update on the work underway to review resource options. This work has been shared with stakeholders as it has progressed and a number of technical meetings have been held. To date a wide range of resource options have been reviewed and the options refined through a screening process agreed with stakeholders. There are 3 principal large resource options: wastewater reuse, reservoirs, and transfers from the River Severn and within these options there are 14 sub options. A programme of investigations is now underway to address some of the uncertainties and improve understanding of the options. The next technical stakeholder meeting will be on the 6 November in Reading. An updated screening report will be published in June 2016.

Severn Thames Transfer

Steve Tuck gave an update on work to examine the options to transfer water from the River Severn to the River Thames. There are on-going studies to examine potential water quality and ecology issues associated with a transfer and also studies to examine flow availability. Current work is focused on baseline assessments for the hydrology, protected species and invasive species and fisheries.

Lower Lee Investigations

Steve Tuck gave an update on the investigation into abstractions in the Lower Lee. A technical meeting was held in July to discuss and agree the scope of work. The next step is to complete the tender process to complete the studies.

TRT: When will you know the extent of sustainability reductions required in the Lee?

TW: The only TW abstraction in the Upper Lee is New Gauge. The main sustainability reductions in the Upper Lee are being implemented by Affinity Water over the next 5-10 year period. The investigation work we are doing will determine whether sustainability reductions are required in the Lower Lee.

ICE: The discharge from Deephams STW is important to flow in the river and the planned upgrade will improve the quality of the treated effluent. What is the status of the reuse proposal at Deephams?

TW: confirmed that Deephams was not a preferred site for wastewater reuse but there may be options for surface abstraction at the bottom of the River Lee just above the tidal interface but the WQ is thought to be very poor and TW is undertaking some sampling.

London Borough of Southwark raised the importance of communication with Local Authorities and the opportunities to use the existing communication channels to explain the work underway on water resources.

TW: thanked the Council for these comments. TW has over 100 Local Authorities within its supply area and there are varying degrees of willingness and capacity within the individual LAs to engage, as such, the use of existing communication channels could be very helpful.

Demand forecasting

Brad Howe presented an overview of the work on demand forecasting which includes industry wide projects to help determine the methodologies for population and property forecasting and household usage. TW has also commissioned work to consider longer term forecast up to 100 years. The Water Resources Forum to be held in January 2016 will focus on demand forecasting.

CPRE asked if TW could circulate the UKWIR reports.

TW explained that UKWIR reports are available to the water industry but not published in the public domain, although they are available for purchase via UKWIR in due course. TW agreed to provide summaries of the reports in advance of the January Forum.

CCWater stated that the volume of leakage is shocking and asked whether the changes to the guidelines for environmental protection will affect the management of leakage.

TW explained that whilst it understood that customers and stakeholders wanted to see further reductions in leakage, the more leakage activity is undertaken the more expensive it gets. Metering will provide a step change in our understanding of leakage and help to more effectively target activity. Recent work has shown that what was classified as leakage was actually usage.

Stochastic drought generation

Chris Lambert explained that for WRMP14 sensitivity testing was completed which exposed the fact that the plan was not resilient against a range of futures. Work is underway to look at a longer time series for droughts than the current historic record. A technical stakeholder meeting will be held at the end of the year to discuss this topic further.

ESW stated that using the historic record makes sense, but are you confident that the evidence will be taken into account for you to make the resource plan more resilient ?

TW explained that 2011/12 saw the driest 24 months on record and this highlighted the importance of ensuring a robust and resilient plan. The guideline changes indicate that regulators recognise the risk, furthermore Southern Water have already used stochastic modelling in their planning for the longer time period from 2020.

EA also referenced the resilience duty that has been placed on Ofwat as an important marker and it is likely that the WRPG Guiding Principles will reference resilience as a key principle.

RWE highlighted that an issue of drought stochastic generation is the probability of an event as well as its severity.

TW agreed with this point and referenced work commissioned with Atkins.

WWF asked if other droughts had also been considered in the context of the Lower Thames Control Diagram

TW explained that a number of plausible droughts from the Future Flows series had been examined. The drought event described in the presentation had been analysed by HR Wallingford and had been assigned a return period of between approximately 250 and 700 years. This compares to the 1 in 1000 year event used by the EA for Thames Estuary 2100 strategic flood plan to protect London against future flood events associated with rising sea levels linked to climate change.

5. General discussion

EA how do you intend to represent the environment as a single metric in the multi-criteria appraisal tool?

JH explained that up to 10 metrics can be used within the tool and so can compare multiple environmental considerations if required. The environment can also be monetised if you are confident with the willingness to pay data.

TW asked for comments on how we can engage and communicate effectively with customers



CPRE advised that TW should:

- consider engaging in different ways, through neighbourhood planning, rural community groups, and social media.
- engage a couple of LAs to help understand how best to engage with LAs.
- Learn from Tideway Tunnel approach and specifically the deliberative research

Southwark advised of a number of routes that could be useful for communication:

- Community councils that meet quarterly
- Friends of parks

Dates of forthcoming meetings:

6 November 2015: Technical Stakeholder Meeting on Phase 2 programme of investigation of water resource options. The meeting will be held in Reading.

November/December 2015 (date tbc): Stochastic Drought Generation

November/December 2015 (date tbc): Programme appraisal

14 January 2016: Water Resources Forum. The forum will be held in Reading Town Hall. At this forum we will cover demand forecasting and environmental assessment.

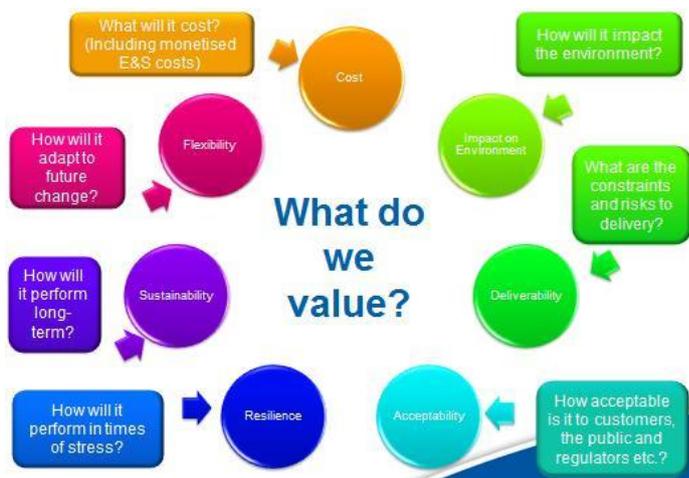
Attendees:

Name	Organisation
Joseph Brooke	Vale of White Horse District Council (VoWH)
Ken Burgin	Cotswold Canals Trust (CCT)
Helen Charlton	Consumer Council for Water (CCWater)
Trevor Cramphorn	Cotswolds Rivers Trust (CRT)
Tony Crisp	Cherwell District Council
Christine Drury	CPRE
Neil Edwards	RWE Generation UK
Colin Fenn	WWF
Nuala Gallagher	London Borough of Newham
Peter Gray	Royal Berkshire Fire and Rescue Service
Tora Hallatt	Environment Agency (EA)
Andy Hanson	London Fire Brigade
Peter Hetherington	Ofwat
Julien Harou	University of Manchester
Harry Hodgson	CCG
Lesley Inwards	Canal and Rivers Trust (CRT)
John Kissi	Southwark Council
Martin Lunn	Essex and Suffolk Water (ESW)
Saska McGrath	Bournemouth Water
Sandy Muirhead	Spelthorne Borough Council
Alex Nickson	GLA
Ben Piper	Atkins
Denise Rowley	Port of London Authority (PLA)
Jennifer Sibley	London Councils
Mark Smith	United Utilities
Kevis Pacos	University College London
Peter Spillett	Thames Rivers Trust (TRT)
Derek Stork	Group Against Reservoir Development (GARD)
Sarah Wardell	Environment Agency (EA)
Dave Wardle	ICE
Mark Worringham	Reading Borough Council

Appendix 1

Programme appraisal metrics

Programme appraisal metrics



Components

- Strategic Environmental Assessment
- Habitats Regulation Assessment
- Water Framework Directive
- Landscape and Visual Impact Assessment
- Benefits Assessment Guidance to monetise aspects
- Expert judgement of non-monetisable aspects

Impact on Environment

Issues/ Opportunities

- Monetised environmental and social costs are insignificant compared with capital and operational expenditure and do not significantly impact programme selection
- Expert judgement weighing of non-monetisable impacts is subjective
- SEA has been criticised as not detailed enough for all environmental issues of concern



Components

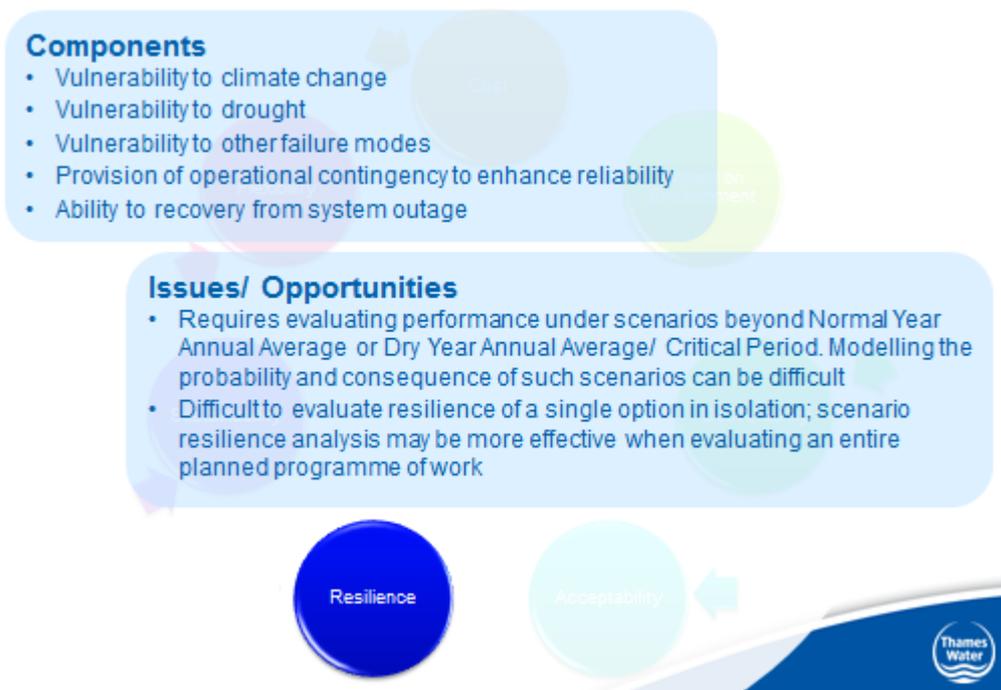
- Lead Time - time to deliver a scheme
- Construction risks and uncertainties
- Operability – is it easy to use and dependable
- Dependencies on flow, quality, 3rd parties
- Data reliability – design and deployable output

Deliverability

Issues/ Opportunities

- Risk and uncertainty evaluation methods are under review
- Lead times can be very complex for schemes with significant planning challenges but it is important that best value schemes are not set aside in favour of a short term reactive response





Components

- Impact on per capita consumption
- Impact on leakage
- Financial impact on future generations
- Environmental impact on future generations



Issues/ Opportunities

- Maintenance & running costs plus monetised ongoing environmental costs are included in the Cost parameter; discounting means these are a small part of the total costs and may not be considered effectively
- Financial impact should include longevity of each component of a scheme over the longer term; will it need replacement/ maintenance/ enhancement shortly after the planning period ends? Forecasting for a longer planning horizon increases uncertainty



Components

- Phasing – potential for incremental construction
- Adaptability – ease of extension once built
- Ramp-up – speed with which scheme can respond to changes in demand

Issues/ Opportunities

- For schemes where economies of scale are strongest the benefits of phasing would be the least as it could incur significant additional cost and disruption however these need to be considered against deferred expenditure
- There are many plausible futures for the South East and the ability to be adapt to future change is important