# Thames Water Final Water Resources Management Plan 2019

# **Technical Appendices**

**Appendix S: Stakeholder engagement** 



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#### Appendix S.

# Stakeholder engagement

## A. Introduction

- S.1 There is wide interest in the sustainable management of water resources. We have engaged with customers, regulators and other stakeholders throughout the development of our Water Resources Management Plan (WRMP) and sought feedback via formal public consultation on our plan.
- S.2 In this appendix we provide an overview of the pre-consultation engagement we have undertaken with stakeholders and how we have responded to issues raised by stakeholders, the public consultation held on the draft plan in spring 2018 and the further consultation held on our revised draft plan in autumn 2018. The structure of the appendix is as follows:
  - regulatory requirements and expectations
  - previous commitments
  - overview of our pre-consultation stakeholder engagement programme
  - key issues raised by stakeholders during the development of the draft WRMP and our response to them
  - public consultation on the draft plan
  - further consultation on our revised draft plan

# B. Regulatory requirements and expectations

- S.3 The Water Resources Planning Guideline<sup>1</sup> specifies the need for engagement with regulators, customers and interested parties. It sets out a number of requirements and recommendations as summarised in the following paragraphs.
- S.4 A requirement for pre-consultation discussions with the following statutory consultees:
  - the Environment Agency and the Secretary of State for Environment, Food and Rural Affairs (Secretary of State)
  - Natural Resources Wales (NRW) and the Welsh Ministers, if the plan will affect sites in Wales
  - Ofwat
  - any licensed water supplier that supplies water to premises in your area through your supply system

<sup>&</sup>lt;sup>1</sup> Water Resources Planning Guideline, April 2017. Issued by the Environment Agency and NRW and produced in collaboration with Defra, the Welsh Government, and Ofwat. Updated in July 2018.



- S.5 A recommendation for pre-consultation discussions with other consultees, for example:
  - any water supplier affected by our supply system
  - any water companies with whom we have bulk supply or shared resource agreements with neighbouring water companies
  - customer challenge groups or their equivalent
  - River Basin Liaison Panels and local catchment partnerships
  - any other groups the plan is likely to affect
  - any potential water supplier, company or third party who we may trade with
  - Consumer Council for Water (CCWater)
  - Public Services Boards and other public service providers
  - Natural England (NE) or NRW if the plan is likely to affect a designated site
- S.6 A recommendation that methods and approaches are discussed with the Environment Agency through the development phase and that method statements are provided to describe the methods that will be used in the WRMP.
- S.7 A requirement to carry out a public consultation on the draft WRMP.
- S.8 We are also required to comply with the requirements of the Strategic Environmental Assessment (SEA) Regulations<sup>2</sup> and Habitats Regulations<sup>3</sup>, which have their own specific consultation obligations.

## C. Previous commitments

- S.9 We made commitments in our previous plan, Water Resources Management Plan 2014 (WRMP14), to undertake several studies over the five year period from 2015 to 2020 to inform future water resource planning. These commitments, and information on the work completed to satisfy each of the commitments, are presented in Table S-1.
- S.10 We committed to engage with stakeholders as we undertook this work. To aid this, we prepared and published a water resources work programme and an accompanying report. The work programme was designed to enable stakeholders to understand the work that was planned and the timing of it, and to ensure they had an opportunity to input and contribute in a timely manner. The accompanying report provided further information on each work stream set out in the work programme. We have reviewed, updated and republished these documents on a quarterly basis up to the submission of the draft plan. The work programme and accompanying report that were published in August 2017 are provided in Annexes S1 and S2.
- S.11 Alongside these documents, we also published a statement of Water Resources Stakeholder Engagement which outlined how we would work with stakeholders as we developed our WRMP. We have reviewed, updated and published this statement on a quarterly basis, alongside the

<sup>&</sup>lt;sup>2</sup> The Environmental Assessment of Plans and Programmes Regulations 2004 (S.I. 2004 No. 1633)

<sup>&</sup>lt;sup>3</sup> The Conservation of Habitats and Species Regulations 2010 (as amended by the Conservation of Habitats and Species (Amendment) Regulations 2011, and the Conservation of Habitats and Species (Amendment) Regulations 2012)



work programme and accompanying report. The statement of Water Resources Stakeholder Engagement which was published in August 2017 is provided in Annex S3.

Table S-1: Commitments made in WRMP14 and progress against these commitments

| WRMP14 – commitment  | Progress update   | Section<br>of the<br>plan                |
|--|---|--|
| Detailed studies to identify the large water resource options that will provide the best overall value to customers and the environment to meet the long term supply needs. We intend to examine wastewater re-use, additional storage in reservoirs and regional transfer of water from other areas of the country, including the use of the canal network. In completing these studies it is important to consider the solution not only for the Thames Water (TW) supply area but also for the wider south east region. These studies will be undertaken in consultation with regulators and interested stakeholders. | We started a phased programme of work in 2014 to identify and examine the large water resource options. Since this time we have completed detailed studies to examine options to manage demand for water and to provide new water supplies. We have engaged with stakeholders as we have undertaken this work, and shared outputs at regular intervals, providing the opportunity for input to the work. We have responded to comments received from stakeholders and published our response.  We have considered options for Thames Water's supply area and the wider south east region. | 7,8 & 9                                  |
| Improvements to our hydrological models used to estimate Deployable Output (DO). We will continue to work with the Environment Agency as we complete this work and will engage with other interested parties as this work moves forward.   | We have an improved water resources management system model (WARMS2) which is used to assess deployable output (DO). We engaged with the Environment Agency on the work completed to improve the model, including refinements to the Lower Thames Control Diagram (LTCD). We also shared this work with stakeholders.  WARMS2 has also been reviewed by   | Section 4<br>and<br>Appendix I           |
|  | recognised independent industry experts, HR Wallingford, and we have commissioned periodic audits to ensure the model remains fit for purpose, and to provide assurance to this effect for external stakeholders. We presented this to stakeholders at the November 2017 Water Resources Forum.   |  |
| Review of the effectiveness of the demand management activities. The roll out of progressive metering in London in AMP6 (2015-2020) will provide more detailed and comprehensive information on leakage that we will use to revise our leakage targets and long-term strategy in our next plan   | We committed to deliver a substantial demand management programme in the five year period to 2020. We monitor progress and report performance in the Annual Review which is published on our website www.thameswater.co.uk/wrmp. The most up to date information on demand management activities has been used to develop this WRMP.  | Sections 2<br>& 8                        |
| Completion of trials to explore the use of pricing tariffs. We recognise the importance of customer engagement in the design and implementation of tariffs and how crucial this will be to build and maintain customer confidence. The trials will test  | We completed a desk based review of tariffs, both in the UK and internationally, to understand the types of tariffs in use, the methods of implementation and the effectiveness of the tariffs. We have also completed research with customers. This research indicated that customers are  | Section 8,<br>and<br>Appendices<br>N & T |



| WRMP14 – commitment  | Progress update   | Section<br>of the<br>plan      |
|--|---|--------------------------------|
| customer's views on tariff types, forecast savings, monitoring of savings and analysis of the impact of tariffs on micro-components.   | sceptical of tariffs. They consider that, to be fair, everyone should be on a meter before tariffs are introduced and that education is required on water use as a precursor for tariffs to work effectively. In response to the feedback received from customers we have developed a reward based incentive scheme. We have completed a trial in Reading, and have extended the scheme to London. The scheme is a positive intervention, intended to help customers understand their water use and encourage the efficient use of water through rewards. The effectiveness of the scheme will be assessed, using both quantitative and qualitative data, to inform our future strategy on incentives. We will also continue to evaluate financial tariffs and reconsider their use once we reach 65-70% meter penetration. |                                |
| Innovation to identify a solution for metering individual flats with complex plumbing arrangements; explore how we may be able to apportion consumption information from a bulk meter and to investigate metering of communal hot water systems which are currently being installed in some blocks of flats. | We are continuing to roll out our Progressive Metering Programme. We have learnt a great deal over this period in terms of meter technology, engagement with customers, type of support preferred by customers and the process for efficient installation. We have explored innovative approaches to overcome some of the challenges identified for example:  | Section 8<br>and<br>Appendix N |
|  | <ul> <li>New ways of working to improve the<br/>internal fit rate such as a new stop tap<br/>adapter which allows us to install on<br/>pipework where there is insufficient<br/>space for a meter and improved training<br/>for plumbers, including training on<br/>adapting and making good areas like<br/>kitchen cupboards, which may require<br/>adaption to facilitate a meter;</li> </ul>   |                                |
|  | <ul> <li>we are installing bulk meters on blocks<br/>of flats, which could be unmeterable<br/>internally on an individual billing basis,<br/>to help us find and fix leaks on these<br/>supplies</li> </ul>   |                                |
|  | <ul> <li>we have implemented a multi-channel<br/>customer journey which utilises texts,<br/>emails and online appointment booking<br/>to engage with customers that we've<br/>been finding hard to reach</li> </ul>   |                                |
|  | <ul> <li>we have trialled a range of marketing<br/>campaigns and face to face community<br/>engagement.</li> </ul>  |                                |
|  | We have briefed stakeholders on progress with the metering programme at regular intervals.  |                                |



| WRMP14 – commitment   | Progress update  | Section<br>of the<br>plan      |
|---|--|--------------------------------|
| Further work to examine the resilience of our current system to future uncertainties. | The 2010-2012 drought exposed potential weaknesses in the existing regulatory guidance for assessing the resilience of water supply systems and that altering the historic record of rainfall and evaporation may not adequately reflect how the system might respond to more intensive droughts than those which have occurred in the historical record. We commissioned WS Atkins to investigate prolonged droughts, adopting a stochastic based forecasting approach, and developed stochastic drought libraries for both the River Thames and Severn catchments. This work was used in the draft Drought Plan 2017 to assess our resilience to more extreme drought events than occurred in the available historical record and has been used to assess the reliable yield of new surface water resource options in the WRMP19. The reports produced by WS Atkins have been published on our website <sup>4</sup> . There has been engagement with stakeholders on this work, most recently a technical meeting in January 2018 to agree the methodology to assess the resilience of the reservoir to drought. | Section 4<br>and<br>Appendix I |

# D. Overview of our stakeholder engagement programme

S.12 We have undertaken an extensive programme of engagement with stakeholders since January 2014 to support the development of our WRMP. In delivering this programme we have aimed to cover all the component topics of the WRMP, and for each topic we have explained the technical methods and approaches, application of the methods and source data, and the analysis and outputs. In adopting this approach we have tried to build stakeholder's understanding of the work that we have undertaken, and provide the opportunity to discuss this work with us and input to it in a timely way. This approach has been valuable to us, helping us to identify, understand, and respond to issues and concerns during the development of the WRMP and ultimately producing a better plan. We have also received positive feedback from stakeholders on the engagement undertaken and opportunity to work together to develop the future strategy. Figure S-1 illustrates the component topics of the WRMP and the engagement approach.

<sup>4</sup> www.thameswater.co.uk/wrmp



Figure S-1: Component topics of the WRMP and the engagement approach

# Since 2014 we have been undertaking detailed work to inform our long term water resources strategy



# And have shared this work along the way



S.13 The programme has included engagement with a range of stakeholders including regulators, stakeholders, neighbouring water companies, third party organisations and customers. The main stakeholder groups, and how we have engaged with them, is summarised in Table S-2, with more detailed information presented on each of the groups in the following text.



Table S-2: Overview of the stakeholder groups and engagement approaches

| 1 4 5 1 5 1 5 1 5 1 5 1 5 1                  | w of the stakeholder groups and engagement approaches  |
|--|--|
| Customers                                    | Our customers are at the heart of our business. We need to understand the priorities of our customers and respond to these in developing our future plans. We have undertaken a programme of research and engagement to understand customers' views on a range of water resource matters. This is aligned with engagement activity to inform the Business Plan. Topics explored with customers include the planning process, levels of service, resilience and feasible options. More information is presented in Appendix T. We also undertook a number of local events through May-July 2017 to engage with local communities and again in Spring 2018 to promote the public consultation on the draft plan and to seek feedback. Further detail on this is included in our Statement of Response. |
| Customers –<br>CCG                           | The Customer Challenge Group (CCG) was set up to test the quality of our engagement with customers and how we responded to their priorities in developing our Business Plan 2015-2020 and WRMP14. We are continuing to work with the CCG as we progress work to inform our PR19 and WRMP19. We provide quarterly reports and presentations to the CCG on the development of the draft WRMP and engage with them on the research programme. We have received objective and constructive feedback from the CCG and their input and challenge has been helpful in shaping our long term plan.   |
| Regulators –<br>Environment<br>Agency        | We hold regular meetings with the Environment Agency to discuss water resources matters. The purpose of these meetings is to discuss technical work and to ensure the Environment Agency has the opportunity to raise concerns, contribute to the work, and to agree approaches and technical methods where required.  Each quarter we provide a progress report on the water resources work programme to the Thames Water/Environment Agency Directors' meetings. The purpose of the report is to highlight any risks or issues on water resources that require discussion.   |
| Regulators - All                             | We hold meetings with other regulators (Ofwat, NE, HE, DWI and NRW) on specific topics as appropriate to ensure they are updated on technical work and to give them the opportunity to raise concerns and contribute to the work. We have also engaged with the Welsh Government.  |
| Regulators – All                             | We are involved in a number of research, technical and strategic projects such as the Water Resources in the South East (WRSE) Group, Water Resources East (WRE) Group, UKWIR research, Environment Agency technical projects and the industry wide Strategic Water Resources Liaison Group. Regulators and other organisations are involved in the majority of these groups.  |
| Stakeholders                                 | We hold Water Resources Forums on a regular basis to which all interested organisations are invited. The purpose of the forums is to update stakeholders on our work and to give them the opportunity to discuss and challenge our approach and to highlight issues and concerns. The agenda for these forums is aligned with the work programme and also in response to feedback from stakeholders. We regularly review the approach to engagement and seek feedback at the forum to ensure the approach is meeting the needs of stakeholders.  |
| Stakeholders                                 | We continue to convene technical meetings on specific topics that stakeholders are interested in. These meetings give stakeholders the opportunity for greater discussion and scrutiny on specific technical matters. We also hold one to one or sub meetings as needed.   |
| Water companies and commercial organisations | We engage with water companies and external organisations to identify opportunities for collaboration and partnerships including identification of opportunities for sharing and trading resources to ensure the most effective use of available resources.  |
| Local<br>communities                         | We have proactively engaged with local communities through the development of our plan and as part of the public consultation. This includes engagement with Local Authorities and Parish Councils as well as holding drop-in events and Local Engagement Forums. The purpose of this engagement is to give  |



local communities and customers an opportunity to hear about our future plans and raise points that they want to be taken into consideration.

S.14 The main engagement methods that we have used are the following: Water Resources Forum, Technical Stakeholder Meetings and one to one meetings. A list of the Technical Stakeholder Meetings and Water Resources Forum held since January 2014 is provided in Table S-3. The Water Resources Forum is chaired by Richard Aylard, Director of External Affairs and Sustainability and the Technical Meetings are chaired by Dr Chris Lambert, a Senior Manager responsible for the WRMP. We have invited external speakers and technical consultants to support us in presenting information to stakeholders and have ensured that the appropriate Thames Water staff and supporting consultants have attended these meeting to facilitate detailed discussion, and answer queries as fully as possible during the meetings.

Table S-3: Technical stakeholder meetings and water resources forums

| 2014         |   |
|--------------|---|
| 31 January   | Water Resources Forum  Update on the metering programme and discussion on:  - Demand management and innovative tariffs  - Future uncertainties  - Assessing available water resource                                      |
| 6 June       | Water Resources Forum  - Leakage and the sustainable economic level of leakage - Metering and experience of Southern Water - Review of water resource options – Phase 1 programme   |
| June         | Stakeholder Technical Meeting - Severn Thames Transfer (STT) studies  |
| 30 September | Stakeholder Technical Meeting - Resource options  |
| 6 October    | Annual Stakeholder Meeting  Overview of our operational performance and then specifically on water resources:  - Focus on demand management - Further work in the next five years - Resilience of the water supply system |
| 2015         |   |
| 7 January    | Stakeholder Technical Meeting  - Resource options - Review of the screening approach and initial output   |
| 20 January   | Water Resources Forum  - Overview of the work programme - Update on work to review large resource options - Water efficiency and partnership working - Sustainable abstraction and the River Kennet                       |
| 26 March     | Stakeholder Technical Meeting  - Resource options - Review the output of the screening and the refined list of options  |
| 6 May        | Stakeholder Technical meeting - STT studies   |



|             | Water Resources Forum   |
|-------------|---|
|             | <ul> <li>Overview of the work programme</li> </ul>  |
|             | - Update on work to review large resource options and   |
| 11 May      | presentation on the refined list of options   |
|             | <ul> <li>Presentation on WRSE and Water Resources East (WRE) and</li> </ul>                         |
|             | the integration with WRMPs  |
|             | Stakeholder Technical Meeting   |
| 13 July     | - Resource options covering small resource options and an   |
|             | introduction to Phase 2 investigations  |
| 15 July     | Stakeholder Technical Meeting   |
|             | <ul> <li>Lower Lee studies</li> </ul>   |
|             | Water Resources Forum   |
|             | <ul> <li>Introduction to programme appraisal and decision making tools</li> </ul>                   |
| 7 September | <ul> <li>Developments to the regulatory frameworks – Drought Plan and WRMP</li> </ul>               |
|             | <ul> <li>Overview of the work to review small resource options and the</li> </ul>                   |
|             | Phase 2 investigations  |
|             | Stakeholder Technical Meeting   |
| 6 November  | <ul> <li>Resource options providing an update on phase 2 investigations</li> </ul>                  |
|             | and focus on the Cotswold Canals transfer and third party   |
|             | options   |
| 4 December  | Stakeholder Technical Meeting   |
| 2016        | Stochastic drought generation   |
| 2016        |   |
| 14 January  | Water Resources Forum   |
| 14 January  | <ul> <li>Demand forecasting and population projections</li> <li>Environmental assessment</li> </ul> |
|             | Stakeholder Technical Meeting   |
| 24 February | STT water quality and ecology study   |
|             | Stakeholder Technical Meeting   |
| 22 March    | Programme appraisal – the proposed approach to decide on the  |
|             | preferred programme.  |
|             | Water Resources Forum   |
|             | Review of decision making frameworks to support programme   |
| 18 April    | development   |
|             | <ul> <li>Abstraction Incentive Mechanism (AIM)</li> </ul>   |
|             | Stakeholder Technical Meeting   |
| 6 May       | <ul> <li>Progress updates on the investigations into resource options</li> </ul>                    |
| a,          | and demand management options.  |
|             | Water Resources Forum   |
|             | Update on options work – feasibility reports and screening  |
| 5 July      | Engagement with customers   |
|             | Stakeholder Technical Meeting   |
| 6 October   | <ul> <li>Progress updates on the investigations into resource options</li> </ul>                    |
|             | i rogress upuates on the investigations into resource options                                       |
|             |   |
|             | and demand management options.  |
| 27 October  |   |



|               | <ul> <li>Headlines from WaterUK water resources long term planning project</li> <li>Headlines from the options work and next steps</li> </ul>  |
|---------------|--|
|               | Stakeholder Technical Meeting  |
| 8 November    | <ul> <li>Programme appraisal, the process to decide on the preferred<br/>programme, focused on the metrics and scenarios</li> </ul>  |
| 2017          | ,  |
|               | Stakeholder Technical Meeting  |
| 7 February    | <ul> <li>Screening of resource options and demand management options</li> <li>assessment of wider supply system</li> </ul>   |
|               | Water Resources Forum  |
| 16 March      | <ul> <li>Review of current demand management programme and effectiveness of activities</li> <li>Headlines from the WRSE, options work and next steps</li> </ul>  |
| 20 April      | Stakeholder technical meeting  |
| 28 April      | <ul> <li>Update on resource options and demand management options</li> </ul>   |
|               | Local Engagement Forums and Roadshows  |
| May/June/July | <ul> <li>Events held across the Thames Water supply area to engage<br/>with local communities and stakeholders on our future plans</li> </ul>  |
|               | Stakeholder Technical Meeting  |
| 19 June       | <ul> <li>Assessment of environmental and social impacts of new<br/>resource options, and future options to manage the demand for<br/>water.</li> </ul>   |
|               | Water Resources Forum  |
| 18 July       | <ul> <li>Baseline supply demand forecasts including an overview of the assessments of the medium and long term population forecasts.</li> <li>Update on programme appraisal and use of scenarios.</li> </ul> |
|               | Annual Stakeholder Review  |
| 6 November    | <ul> <li>Key priorities for society, the environment and the economy, and<br/>balancing these.</li> </ul>  |
|               | Water Resources Forum  |
| 21 November   | <ul> <li>Overview of key topics in the draft WRMP19 ahead of the public<br/>consultation on the draft WRMP.</li> </ul>   |
| 2018          |  |
|               | Stakeholder Technical Meeting  |
| 29 January    | <ul> <li>Resilience analysis of the reservoir in response to<br/>methodological issues raised by GARD</li> </ul>   |
|               | Stakeholder Briefing   |
| 5 February    | <ul> <li>Briefing on our draft WRMP and pre launch of the public consultation</li> </ul>   |
|               | Water Resources Forum  |
| 12 March      | <ul> <li>Update on developments on the draft WRMP and an opportunity<br/>for discussion on parts of the draft plan</li> </ul>  |
|               | Local Engagement Forums and Roadshows  |
| May/June/July | <ul> <li>Events held across the Thames Water supply area to engage<br/>with local communities and stakeholders on our future plans</li> </ul>  |
|               | Water Resources Forum  |
| 17 August     | <ul> <li>Update on the public consultation, main revisions to the draft<br/>plan and confirmation of further engagement</li> </ul>   |
|               |  |



#### **Water Resources Forum**

14 March

Update on the further consultation, further work on the WRMP including adaptive planning and commitment to collaborative studies to 2022. WRSE and Affinity Water also joined the WRF.

# Customers and the Customer Challenge Group

S.15 We have undertaken a detailed programme of research and engagement with our customers to ensure we understand, and respond to, their priorities and preferences. This is written up in detail in Appendix T: Our customer priorities and preferences. We have worked closely with our CCG which has a responsibility for monitoring, challenging and providing input into our ongoing customer engagement programme. We have provided monthly updates on the engagement programme, seeking their comments in the design and delivery of the research and engagement programme, and explaining how the output information will be used to shape our long term plans. We have also provided quarterly progress updates on the WRMP. We have also invited members of our CCG to attend our Water Resources Forum and Technical Stakeholder Meetings.

# Regulators

S.16 All our regulators are invited to attend our Water Resources Forum and Technical Stakeholder Meetings. In addition we have held separate discussions with them; further details are set out below.

#### **Environment Agency**

- S.17 We have held regular update meetings with the Environment Agency throughout the development of our WRMP. The purpose of these meetings has been to outline the methodologies, approaches and assumptions to be used in the WRMP, to ensure the Environment Agency is briefed on our approach and to provide the opportunity to raise any concerns. We have also hosted technical seminars with Environment Agency representatives to present new approaches and discuss specific topics in more detail such as the stochastics analysis of drought, and the PolyVis visualisation tool used in programme appraisal. Overall the discussions have been helpful. The Environment Agency has provided feedback and comment on our approaches, method statements and technical reports although noting that all the comments provided by the Environment Agency to date are without prejudice, as the Environment Agency has set out that they will not formally sign off or agree methods and approaches in advance of submission of the draft plan.
- S.18 A list of the meetings held with the Environment Agency<sup>5</sup>, and summary of the topics covered in each meeting is provided in Table S-4. Minutes of the meetings have been recorded and these have been made available to stakeholders on request. The Group Against Reservoir Development (GARD) has requested copies of the minutes from these meetings.

<sup>&</sup>lt;sup>5</sup> Note this is not a complete listing of all meetings held between Thames Water and the Environment Agency. These meetings are those that are specifically focused on discussions related to the WRMP.



Table S-4: List of meetings held with Environment Agency technical teams

| Date                      | Main discussion topics   |
|---------------------------|--|
| 2015                      |  |
| February                  | Update on resource options and specifically Mogden reuse options Progress update on the STT studies Review of regulatory requirements for wastewater reuse   |
| March                     | Mogden reuse/augmentation options Reuse – principles and specific regulatory requirement North Orpington Sustainability Reduction (SR) Planned Flood Alleviation Schemes in Oxfordshire Molesey Weir |
| April                     | Review of Swindon & Oxfordshire (SWOX) water resource zone (WRZ) population forecasts and pilot study Progress update on assessment of large resource options Discussion on Molesey flow constraint  |
| April                     | Workshop on flow augmentation and reuse options  |
| Мау                       | STT Studies Reuse – next steps Housing growth forecasts Update on the timeline for the Drought Plan Learnings form demand management LTCD optimisation   |
| July                      | Review of options < 50 MI/d Discussion on phase 2 option investigations Progress update on STT studies   |
| August                    | Resource options – comments on the small options and Phase 2 investigations Discussion on Annual Review Update on the Drought Plan Overview of work on population and property projections           |
| October                   | Update on independent audit of GARD's model Update on LTCD Approach to environmental assessment WRMP process verification Discussion on decision making techniques Catchment management on Lower Lee |
| October (21)              | STT - Water quality and ecology studies  |
| November                  | LTCD optimisation Phase 2 investigations – feedback from the stakeholder meeting Update on innovative tariff trials  |
| December (4)<br>- Seminar | Stakeholder meeting on stochastic drought generation   |
| December<br>(15)          | Draft Guideline for Water Resource Planning Teddington Target Flows AIM Outage   |



| Date                     | Main discussion topics  |
|--------------------------|---|
|                          | Update on Phase 2 option investigations   |
| December                 | Regional raw water transfers (meeting with Environment Agency, NRW and United Utilities)  |
| 2016                     |   |
| January                  | Discussion on the methodology for environmental and social assessment to support WRMP19   |
| February (3)             | Water treatment works (WTWs) capacity as impacted by ongoing changes in algae patterns driven by climate change   |
| February                 | Update on forecasts for future demand AIM Groundwater schemes Update on STT studies Environmental assessment  |
| March                    | AIM – discussion on trigger levels River Severn flows Update on the Drought Plan Optimisation of LTCD   |
| April                    | Demand management options  Work programme look ahead and resources  Optimisation of LTCD – next steps   |
| May                      | Water reuse and non-potable reuse Planning horizon – NERA work No deterioration Groundwater options - Medmenham Optimisation of the LTCD and next steps   |
| June                     | Programme update Working with Environment Agency on the options assessments Problem characterisation assessment for each WRZ Customer research – overview of plans SEA, Habitats Regulations Assessment (HRA), Water Framework Directive (WFD) – consultation on the scoping report |
| August (1)               | Programme update Annual Review – Environment Agency queries Problem characterisation – Environment Agency feedback Non-household demand forecast methodology Population and property methodology  |
| August (9)               | Options - potential licence changes/requirements  |
| August (11) -<br>Seminar | Stochastic based drought forecasting  |
| September                | Programme update SEA scoping report & consultation Update on Resource Option investigations:  Direct River Abstraction (DRA) Feasibility report  Discharge Consent Study  Severn – Thames Water quality & ecology report  Resource Option Fine Screening report                     |



| Date               | Main discussion topics  |
|--------------------|---|
| October            | Programme update STT transfers – Issues including Invasive Non-Native Species (INNS) Groundwater options and sustainable abstraction Update on problem characterisation and approach to programme appraisal WaterUK Study Household Demand Forecast Method Statement Drought Plan and timings |
| November           | Programme update Long-term demand forecast project (to 2100) with University of Leeds Feasibility Options Reports and Fine Screening report – Priority Issues for Environment Agency Environmental assessment and metrics   |
| December           | Programme update Supply side method statements Environmental assessment and mitigation  |
| 2017               |   |
| January            | Programme update Proposed approach to programme appraisal and the use of metrics Groundwater options  |
| February           | Programme update Overview of supply side method statements  |
| March<br>(Seminar) | Programme appraisal – decision support tools  |
| March (24)         | Water Industry National Environment Programme (WINEP) – SRs and no deterioration assessment for groundwater options Overview of work to examine options & Environment Agency feedback Teddington DRA Lower Lee DRA GARD proposal for effluent reuse in the Thames Valley                      |
| April (27)         | Headlines from ongoing work on the Option Feasibility Reports and the Fine Screening Report Baseline Supply Demand forecast Update on WRSE Supply side method statements  |
| May (22)           | Programme Update Environment Agency comments on Option Feasibility and Fine Screening reports Developing programmes of demand management options Natural Capital Accounting   |
| May (24)           | Teddington DRA scheme – Presentation of hydrological and ecological assessments. Further investigations identified to understand the impacts upon the lower freshwater Thames.  |
| June (21)          | Sustainability reductions, WFD no deterioration and Time Limited Licences Resource options – Teddington DRA and STT (regulatory issues including Hands of Flow requirements)  |



| Date      | Main discussion topics  |
|-----------|---|
|           | SEA - Thames Water Thames Water provided SEA assessments for all the options elements, HRA and WFD assessments for Environment Agency review and feedback  Overview of assessment of cost and risk. |
| June (13) | Introduction to Polyvis – programme appraisal tool  |
| June (23) | Teddington DRA - modelling of the lower freshwater River Thames, changes in sediment flux and ecological assessment of the impact on benthic macroinvertebrates and INNS in the Upper Tideway.      |
| July (20) | Thames Valley reuse opportunities   |
| September | West Berks Groundwater Scheme (WBGS) WRZ Integrity Other supply side method statements Design droughts Review of scenarios Programme appraisal Environmental assessments Catchment management       |
| 2018      |   |
| March     | Teddington DRA plus a number of other WRMP related issues   |
| Мау       | Key issues raised in the EA representation to our draft WRMP19  |
| Мау       | Technical meeting on Teddington DRA   |
| June      | Key issues raised in the EA representation to our draft WRMP19  |
| July      | Key issues raised in the EA representation to our draft WRMP19  |
| July      | Programme appraisal update and stress tests   |
| July      | Technical meeting on Teddington DRA   |
| December  | Discussion on EA representation to the further consultation on the revised draft WRMP   |
| 2019      |   |
| February  | Follow - up discussion on EA representation to the further consultation on TWs revised draft WRMP and Ofwat's IAP   |
| March     | Discussion on adaptive planning to understand and address EA comments on TW's approach  |

Note - in addition to the update meetings included in the table there have been meetings with the EA to discuss technical work on a range of technical topics including the work on Deephams reuse, Oxford canal transfer and the STT.

- S.19 In March 2017 we prepared a note summarising the engagement between Thames Water and the Environment Agency on work to inform the draft WRMP, highlighting the main topics discussed to that point (March 2017) and issues that were outstanding. This was presented to help to plan ongoing engagement and focus on issues of concern.
- S.20 We held formal pre-consultation meetings with the Environment Agency Regional Directors in August 2017 and January 2018 to ensure the senior Environment Agency team were fully briefed on the development of our draft WRMP. Issues discussed included the work of the



- WRSE Group, the transparency of the programme appraisal process and the use of decision support tools, the use of Natural Capital Accounting and Teddington DRA.
- S.21 We provide progress report on water resources for the quarterly Thames Water and Environment Agency Directors' meeting. The purpose of the report is to highlight any risks or issues on water resources that require discussion at a senior level in the organisations.
- S.22 We will continue to have regular engagement with the EA as we review and revise our draft plan and ensure we discuss and resolve issues of concern. The on-going engagement will include discussion on potential new water resource schemes, namely: Teddington DRA, Deephams reuse and the Severn Thames transfer, but will not be limited to these topics.

#### Ofwat

- S.23 Ofwat has published a number of technical papers and documents<sup>6</sup> to support PR19, and has placed specific focus on four key themes namely: resilience; affordability; innovation; and great customer service. It has proposed a suite of performance measures<sup>7</sup> which reflect the key areas. We have engaged with Ofwat through the development of the framework for PR19, definition of performance measures, opportunities for sharing resources between regions and associated trading agreements, development of innovative tariffs and technical issues such as procurement for strategic infrastructure.
- S.24 We held formal pre-consultation meetings with Ofwat in February and August 2017. The purpose of the meetings was to update on progress with the development of our draft WRMP and respond to questions and queries raised.

#### **CCWater**

- S.25 The main role of CCWater is to ensure consumers are at the heart of the water industry in terms of the nature and quality of the service provided. CCWater has an active role in the CCG. We regularly meet CCWater to discuss a wide range of business issues, we invite them to participate in stakeholder discussions and meetings, and we share with them the work that we do to engage with our customers, both day to day and also to inform future planning.
- S.26 We held a formal pre-consultation meeting with CCWater on 7 November 2017 to provide an update on progress with the development of our draft WRMP. Key points raised in the discussion were around how we intend to achieve a greater level of resilience to drought and the time period over which we will achieve this; the opportunities for both providing and receiving water from other water companies; and the proposed demand management programme and the evidence to support that this is the right scale and type of activity.

#### Natural England (NE)

S.27 We have engaged with NE, on a consultancy basis, and as a statutory regulator, in the development of our draft WRMP.

<sup>&</sup>lt;sup>6</sup> Delivering more of water matters in PR19, Ofwat, July 2017

<sup>&</sup>lt;sup>7</sup> Delivering Water 2020, Ofwat consultation document, July 2017



- S.28 NE has provided comments on a number of resource options, including the transfer of nonnative invasive specifies linked to the Severn Thames Transfer, consideration of Marine Conservation Zones for Tideway resource options, planning resources at a regional level.
- S.29 In the preparation of the SEA and HRA we also worked with NE as a statutory consultee. We have completed consultation on the scope and approach of the SEA and held a technical meeting to discuss our approach to SEA and HRA in more detail.
- S.30 We have continued to discuss issues of concern with NE and in July 2018 we held a meeting to discuss issues raised in their representation to the public consultation on our draft plan. We intend to continue to work with NE to ensure we address issues and concerns and identify opportunities for environmental protection and gain.

#### Drinking Water Inspectorate (DWI)

- S.31 The primary role of the DWI is to ensure the safety and quality of drinking water. We have invited DWI to join our stakeholder meetings and shared information with them on resource options under consideration. Options we consider will be of particular concern to DWI are catchment based schemes, and options which involve the reuse of water. We commissioned the former Chief Inspector of DWI, Professor Jenni Colbourne, to provide advice and feedback in respect of wastewater reuse.
- S.32 We held a formal pre-consultation meeting with DWI in November 2017. The purpose of the meetings was to update on progress with the development of our draft WRMP and respond to key issues, one of which is reassurance that we have fully considered water quality issues in developing and costing future proposals.

#### Welsh Government and NRW

- S.33 We are considering water transfers with United Utilities, Severn Trent Water and Welsh Water in our draft WRMP. These options would have an impact on water resources from Wales and the people of Wales. We have engaged with NRW during the development of the draft WRMP, specifically focusing on the raw water transfers from Lake Vyrnwy. The route of the proposed transfer options have been refined in response to feedback received. There are ongoing discussions around a number of aspects of the transfers including regulation of the River Severn.
- S.34 We held a further meeting with NRW in July 2018 to discuss issues raised in their representation to the public consultation on our draft plan. We intend to continue to work with NRW to ensure we address issues and concerns and identify opportunities for environmental protection and gain.
- S.35 We have also briefed the Welsh Government on our draft WRMP highlighting issues that could affect water resources from Wales and the people of Wales.
- S.36 We have sought feedback from our customers on a range of potential resource options including water transfers from Wales. Our customers raised a number of points around the costs, priority use for the resources in a drought, and resilience of a transfer scheme to a number of factors including pollution and terrorism. We have shared findings from our research with the other water companies. We have undertaken collaborative research with United Utilities and Severn Trent Water to examine customer views in more depth, both from a donor and



recipient point of view, and we sought views from the people of Wales in this research. The output from this work is presented in Appendix T.

#### Historic England (HE)

S.37 We met HE in April 2018 to have a detailed discussion on our draft WRMP and to identify and understand key issues and concerns for HE. HE submitted 2 responses to the public consultation on our draft plan, one from the London region and the other from the Thames Valley region. We conducted a follow up discussion and have responded to the comments made as part of the Statement of Response. We intend to continue to work with HE to ensure they are briefed on the revisions to our draft plan and to ensure we address issues of concern to their satisfaction.

## Stakeholder organisations

- S.38 There is wide interest in water resources from a diverse range of stakeholders, from those organisations who have interest in a specific geographical area, watercourse or single option to organisations who have a broad interest in the sustainable management of resources for the long term.
- S.39 Since January 2014 we have held 35 Technical Stakeholder meetings and Water Resources Forums. The purpose of these meetings is to share work being undertaken to inform the draft WRMP and provide the opportunity for stakeholders to discuss and input to the development of the WRMP. These meetings have also provided a good forum for stakeholder organisations to not only hear from Thames Water, but also to hear each other's viewpoints and comments.
- S.40 A summary of the Meetings and Forums held, including key discussion topics, is provided in Table S-3. We have regularly sought feedback from stakeholders to ensure our engagement approach is meeting their needs. Feedback from the meetings overall has been positive.
- S.41 To ensure transparency we have published pre-meeting papers, and following the meetings we have published the presentations and minutes from these meetings on our website www.thameswater.co.uk/wrmp.
- S.42 We have also held a number of meetings with stakeholders on specific topics of interest. These meetings include: the Port of London Authority to discuss the resource option to abstract additional surface water at Teddington; Albion Water to discuss their commercial proposals and also their work with developers to promote the efficient use of water; Cotswold Canals Trust to discuss the use, and restoration of the Cotswold Canals to convey water as part of the STT; and London Resilience Forum to discuss the importance of a resilient water supply to businesses.
- S.43 The Group Against Reservoir Development (GARD) is an organisation set up to oppose the development of a reservoir in Oxfordshire. GARD has been an active opponent to the reservoir at WRMP09 and WRMP14. GARD are an active participant in the stakeholder meetings held to discuss the draft WRMP, and regularly correspond with us to request information, data, and updates on a range of topics linked to the draft WRMP. We endeavour to respond to GARD in a timely manner, but there is a large volume of correspondence and data and information requests and we must manage these alongside wider business requirements. We hosted a one



to one meeting with GARD in March 2016 and facilitated discussions with GARD and WS Atkins on the WaterUK national study. GARD has also asked to join meetings with the regulators and other water companies, it is not appropriate for GARD to attend all these meetings but we do provide an update on the developments at regular intervals. GARD has requested further one to one meetings with us to discuss the resilience of the reservoir, and other technical work completed on the resource options. These points are of interest to the wider stakeholder community. Therefore we included these discussions in the Water Resources Forum on 21 November 2017 to ensure there is a full understanding of the issues across the wider stakeholder community, and our response to the points. Following this we held a technical meeting on this topic in January 2018, inviting stakeholder organisations who were interested to join the discussion.

S.44 Throughout the pre-consultation period we have published method statements, technical reports and documents and have provided the opportunity for stakeholder comment on some of these. Where comments have been received, we have ensured we have provided feedback and an opportunity for further discussion. The main documents that we have published are noted in Table S-5.

Table S-5: Documents published to support the preparation of our plan

| Date           | Document title/description  |  |  |
|----------------|---|--|--|
| January 2015   | Phase 1 Option Screening Report – draft                                 |  |  |
| March 2015     | Large Resource Option Screening Report – updated draft                  |  |  |
| May 2015       | Large Resource Option Screening Report - draft final, Mott MacDonald    |  |  |
| November 2015  | Cotswold Canal Transfer – Methodology Working Paper, Mott MacDonald     |  |  |
| December 2015  | Technical Note on Stochastic Drought Generation, Atkins                 |  |  |
| May 2016       | Thames Water Trading and Procurement Code                               |  |  |
| June 2016      | Demand Management Feasible Options Paper                                |  |  |
| July 2016      | SEA Scoping Report – Draft for consultation, Ricardo                    |  |  |
| July 2016      | Environmental Assessment – Overview of the approach, Ricardo            |  |  |
| July 2016      | WFD – Methodology Assessment, Ricardo                                   |  |  |
| July 2016      | HRA – Methodology Assessment, Ricardo                                   |  |  |
| August 2016    | Demand Management Option Screening Report                               |  |  |
| August 2016    | Population and Property Forecast - method statement                     |  |  |
| August 2016    | Non-household Demand Forecast - method statement                        |  |  |
| September 2016 | Phase 2 Fine Screening Report Update – resource options, Mott MacDonald |  |  |
| September 2016 | Catchment Management Option Feasibility Report, Mott MacDonald          |  |  |
| September 2016 | Desalination Option Feasibility Report, Mott MacDonald                  |  |  |
| September 2016 | DRA Option Feasibility Report, Mott MacDonald                           |  |  |
| September 2016 | Raw Water Transfer Option Feasibility Report, Mott MacDonald            |  |  |
| September 2016 | Reservoir Option Feasibility Report, Mott MacDonald                     |  |  |
| September 2016 | Reuse Option Feasibility Report, Mott MacDonald                         |  |  |
| September 2016 | Network Reinforcement Cross Option Study, Mott MacDonald                |  |  |



| Date           | Document title/description  |
|----------------|---|
| September 2016 | Water Treatment Cross Option Study, Mott MacDonald  |
| September 2016 | Cost and carbon modelling approach – Methodology, Mott MacDonald                                |
| September 2016 | Whole life costing approach – Methodology, Mott MacDonald                                       |
| October 2016   | STT Water Quality and Ecology Assessment Phase 2  |
| October 2016   | Stochastic Resource modelling Stages 2 & 3, Atkins  |
| November 2016  | Technical papers on problem characterisation, planning horizons and programme appraisal metrics |
| November 2016  | Planning Horizon assessment, NERA   |
| January 2017   | Groundwater Option Feasibility Report – Executive Summary, Mott MacDonald                       |
| February 2017  | Raw Water Transfer Feasibility Update, , Mott MacDonald   |
| February 2017  | Summary, and log, of stakeholder comments on demand management options                          |
| February 2017  | Summary, and log, of stakeholder comments on resource options                                   |
| February 2017  | Stochastic Water Resource Assessment –(UTR), Atkins   |
| April 2017     | Option Feasibility Report Update Note, Mott MacDonald   |
| April 2017     | Fine Screening Report Update – resource options, Mott MacDonald                                 |
| April 2017     | Demand Management Options Screening Report - update   |
| April 2017     | Household Demand Forecast Method Statement  |
| April 2017     | Non-household Extended Horizon Demand Forecast Method Statement                                 |
| April 2017     | Explanation of high growth forecasts for the Thames Water region, University of Leeds           |
| May 2017       | SEA Scoping Report – Statement of Response to Consultee comments – Ricardo                      |
| June 2017      | Non-potable Water Reuse Option Feasibility Report - Arup  |
| June 2017      | Demand Management Options Feasibility Paper June 2017   |
| June 2017      | SEA assessment for feasible options (available on request), Ricardo                             |
| June 2017      | Information provided by Atkins (on behalf of TW) to GARD on the stochastic flow data sets       |
| February 2018  | Draft WRMP19 – Summary Overview, Executive Summary, Technical Report and Technical Appendices   |
| February 2018  | Water Resources Market Information  |
| February 2018  | Fine Screening Report Update – resource options, Mott MacDonald                                 |
| February 2018  | Reservoir Feasibility Report – redacted   |
| February 2018  | Groundwater Feasibility Report – redacted   |
| February 2018  | Desalination Feasibility Report – redacted  |
| February 2018  | Direct River Abstraction Feasibility Report – redacted  |
| February 2018  | Inter-zonal Feasibility Report – redacted   |
| February 2018  | Water Reuse Feasibility Report – redacted   |
| February 2018  | Raw water transfer Feasibility Report – redacted  |
| February 2018  | Options Operating Philosophy (Utilisation)  |



| Date           | Document title/description   |
|----------------|--|
| February 2018  | Discharge Design Standard Cross Option Study Volume 1 Methodology  |
| February 2018  | Discharge Design Standard Cross Option Study Volume 2 Treatment  |
| March 2018     | Cost and Carbon Modelling Approach - Methodology paper (Executive Summary)   |
| March 2018     | Risk Methodology   |
| March 2018     | Approach to Whole Life Costing - Methodology Paper (Executive Summary)   |
| May 2018       | WRMP19 Stochastic Resource Modelling Abingdon Reservoir  |
| July 2018      | WRMP19 Stochastic Methods Supported STT  |
| July 2018      | WRMP19 Stochastic Methods Unsupported STT  |
| July 2018      | WRMP19 Stochastic Resource Modelling Stage 2 & 3   |
| July 2018      | Annual Performance Report 2017-18  |
| July 2018      | STT study CEH  |
| September 2018 | Redacted Groundwater Feasibility Report Executive Summary  |
| September 2018 | Redacted Direct River Abstraction Feasibility Report   |
| September 2018 | Redacted Raw Water Transfer Feasibility Report   |
| September 2018 | Update Note on Resource Options  |
| September 2018 | Thames Tideway Impacts of DRA HRW  |
| September 2018 | Thames Tideway Impacts of WRMP Task 2 Modelling and analysis in lower freshwater Thames HRW  |
| October 2018   | Redacted Water Reuse Feasibility Report  |
| October 2018   | River Severn Losses Estimation HRW   |
| October 2018   | Appendices H-K of SoR No 1 include information on STT conveyance by Cotswold Canals, cost assessment, STT further work and Teddington DRA – common understanding |

- S.45 To support the development of our WRMP, and the Business Plan, we have also undertaken engagement with customers and local communities. During May and June 2017, we held 57 roadshows and seven local engagement meetings to discuss strategic issues, and also issues of local concern. The local engagement meetings were held in Abingdon, Teddington, Cirencester, Enfield, Henley, Marlow, and Guildford. These locations were selected to ensure they provided a good coverage of our supply area and included the main communities who may be affected by our future plans.
- S.46 During spring 2017 we also attended Parish Council meetings in the vicinity of the proposed reservoir to provide an update on the work underway to develop our draft WRMP. In response to discussion at these meetings in July 2017 we held a drop in session in Steventon, Oxfordshire for local residents to discuss the development of the draft WRMP with Thames Water representatives. There was good attendance. The main issues raised were around the current activity on the WRMP, the status of the reservoir in the draft WRMP, potential for exacerbation of local flooding and management of the construction to mitigate the impact on the local community. The local residents were clear that, if the reservoir is taken forwards, we need to work with the local community to fully address their concerns.



S.47 During the public consultation on the draft plan we attended Parish Council meetings, we held specific meetings in local communities which could potentially be affected by our plans and held meetings with organisations and affiliation groups to ensure they were aware of the public consultation and had an opportunity to discuss our draft plan with TW personnel and to feed in their views. Detailed information on the engagement undertaken during the public consultation is presented in the Statement of Response.

## Water companies and third party organisations

- S.48 We have also proactively sought to raise awareness and identify potential options to trade or share resources with third party organisations. We have used the following approaches:
  - Request for proposals for water resources in the Official Journal of the European Union (OJEU)
  - 2) Bilateral discussions with other water companies
  - 3) Discussion with business organisations
  - Active engagement with regional water resource planning groups including the WRSE and the WRE
  - 5) Invitations to join TW stakeholder meetings

#### Request for proposals for water resources

S.49 To support the development of our last WRMP, WRMP14, we published an OJEU notice in 2012 to invite third party organisations to register interest in providing a bulk supply of raw or treated water. We regularly update the OJEU notice (17 February 2015, 25 January 2016 and 18 February 2017). A summary of the responses related to new resource options is set out in Table S-6 together with an update on the status of the proposal.



Table S-6: Status of OJEU water resource options

| Company                                      | Nature of supply option   | Volume<br>(MI/d) | Status of the proposal  |  |  |  |
|--|---|------------------|---|--|--|--|
| Tankering by                                 | Tankering by sea  |                  |   |  |  |  |
| Albion<br>Water                              | Raw water tankering by sea from Norway  | 30 - 440         | Assessment at WRMP14 found tankering by sea to  |  |  |  |
| Iceland<br>Ventures<br>Limited               | Raw water from Iceland via shipping tankers, bladders or pipeline   | >400             | be excessively costly to<br>supply our geographic area<br>and further engagement<br>with Albion Water during  |  |  |  |
| Scottish<br>Water<br>Horizons                | Raw water tankering by sea from Loch<br>Glass catchment, Scotland   | 5                | preparation of WRMP19 has confirmed this. Tankering by sea has therefore been rejected as a generic option type.  |  |  |  |
| Raw water int                                | er-company transfers  |                  |   |  |  |  |
| United<br>Utilities                          | Redeployment of Lake Vyrnwy for STT   | =<180            | Proposals further developed for WRMP19  |  |  |  |
| Severn<br>Trent                              | Combination of redeployment of resources, resource development and water reuse to support STT   | 128 - 198        | and included in Raw Water<br>Transfers Feasibility<br>Report.   |  |  |  |
| Joint United Utilities / Severn Trent Option | Alternative method for making water from<br>Lake Vyrnwy release available to<br>Thames Water through joint approach<br>from United Utilities and Severn Trent |                  | Included in Raw Water<br>Transfers Feasibility<br>Report.   |  |  |  |
| Welsh<br>Water                               | Support from Welsh Water through licence transfer in the River Wye to the STT through the Deerhurst Pipeline  | 60               | The proposal was received too late to include in the draft WRMP but we will include this in the ongoing assessment of options and present it in the revised draft WRMP. |  |  |  |
| Desalination                                 |   |                  |   |  |  |  |
| Subsea<br>Desalination                       | Redeployment of an existing mobile desalination plant to Beckton  | 20.5             | Technical and commercial risks too high compared to a permanent solution tailored to our specific needs.  |  |  |  |
| Licence trading/transfer                     |   |                  |   |  |  |  |
| RWE<br>Npower                                | Temporary agreement in relation to Didcot power station abstraction licence.  | 20 MI/d          | Agreement reached over temporary transfer of 20 Ml/d.   |  |  |  |

## Bilateral discussions with other water companies

- S.50 We have engaged on a bilateral basis with other water companies to identify and develop potential new resource options in the form of:
  - inter-company raw water transfers these are assessed in the raw water transfers feasibility report
  - inter-company treated water transfers these are assessed in the inter-zonal transfer feasibility report



S.51 Companies that are willing to offer water to supply Thames Water include: Albion Water, Wessex Water, Severn Trent Water, Welsh Water, Canal and Rivers Trust, RWE NPower and United Utilities.

### Discussion with business organisations

S.52 For WRMP14 we completed a review of other water abstractors in our region to identify potential opportunities to trade water resources. This work identified an opportunity with RWE npower and we agreed a commercial arrangement with them for a five-year period to 2020. We have re-negotiated the agreement for this draft WRMP19.

#### Active engagement with regional water resource planning groups

- S.53 We are also a member of the WRSE Group which is investigating the potential for regional strategic solutions for water supply in the south east. Alongside all member companies, we have provided costed resource and demand management options for consideration by WRSE. In July 2017 we requested feedback from the other companies in WRSE on their requirements for water from Thames Water so we could take this into account in the development of our WRMP.
- S.54 In July 2017 we received the initial requirements from other companies. These were subsequently refined and confirmed requirements were received in October 2017. These are set out in Table S-7. These data were used in the development of our draft WRMP, further information is presented in Section 7: Appraisal of Resource Options.

Table S-7: Water requirements of other water companies October 2017

|                               | Confirmed requirement (October 2017) |             |                              | Initial requirement<br>(July 2017) |
|-------------------------------|--------------------------------------|-------------|------------------------------|------------------------------------|
| Company                       | Volume of water (MI/d)               | Treated/Raw | Required by (Year)           | Volume of water (MI/d)             |
| Sutton & East<br>Surrey Water | Up to 30                             | Treated     | 2045                         | Same                               |
| Affinity Water                | Up to 100                            | Raw         | 50 MI/d 2049<br>50 MI/d 2066 | Up to 75 MI/d from 2035            |
| South East Water              | 20                                   | Raw         | 2065                         | Up to 40 MI/d from 2060            |
| South East Water              | 10                                   | Treated     | 2045                         | Same                               |
| Southern Water                | Requirement removed                  | Raw         | -                            | Up to 85 MI/d from 2027            |
| Southern Water                | Requirement removed                  | Treated     | -                            | Up to 45 MI/d from<br>2045         |
| Portsmouth Water              | No requirement                       | Raw         | -                            |                                    |

- S.55 Since the publication of our draft plan we have continued to engage with other water companies and third party organisations to identify and take forward opportunities as they arise.
- S.56 The requirements for water from other water companies in the South East have been revised during the public consultation period and are presented in Table S-8.



Table S-8: Water requirements of other water companies pre August 2018

|                               | Confirmed requirement (November 2017) |             |                              | Confirmed requirement (July 2018) |
|-------------------------------|---------------------------------------|-------------|------------------------------|-----------------------------------|
| Company                       | Volume of water (MI/d)                | Treated/Raw | Required by<br>(Year)        | Volume of water (MI/d) and timing |
| Sutton & East<br>Surrey Water | Requirement removed                   | Treated     | -                            | -                                 |
| Affinity Water                | Up to 100                             | Raw         | 50 MI/d 2049<br>50 MI/d 2066 | 100 MI/d 2037/38                  |
| South East Water              | 20                                    | Raw         | 2065                         | -                                 |
| South East Water              | 10                                    | Treated     | 2045                         | -                                 |
| Southern Water                | Requirement removed                   | Raw         | -                            | -                                 |
| Southern Water                | Requirement removed                   | Treated     | -                            | -                                 |
| <b>Portsmouth Water</b>       | No requirement                        | Raw         | -                            | -                                 |

S.57 Southern Water requested that we run 'What if' scenarios with transfers to its supply area. This is a potential, but not confirmed need and Southern Water has advised that its revised draft WRMP preferred plan does not include the transfer. This is presented in Section 10 of the revised draft plan.

# E. Main issues raised by stakeholders during preconsultation

S.58 Over the past three years we have held detailed discussions with stakeholders to inform the development of our draft WRMP. We have responded to points raised by stakeholders, and have commissioned further work where needed to fully answer points raised. A summary of the main points raised by stakeholders and our response to them is presented in Table S-9. This is not a comprehensive list of all issues raised in pre-consultation discussions but presents the main themes. The discussion with stakeholders at the Water Resources Forum and Technical Stakeholder Meeting are recorded in minutes of meetings, these are available on our web site <a href="https://www.thameswater.co.uk/wrmp">www.thameswater.co.uk/wrmp</a>.



Table S-9: Overview of the main issues raised by stakeholders and our response to them

| Issue   | TW response  | Section of the Plan |
|---|--|---------------------|
| Planning principles   |  |                     |
| Why adopt such a long planning horizon for the WRMP   | The water resource challenges facing parts of the Thames Water supply area are substantial and complex. A long term perspective is needed to ensure a sustainable and robust strategy is defined. We have followed UKWIR guidance in assessing the problem in each WRZ, referred to as problem characterisation. This assessment has helped to evaluate the duration of the planning horizon and types of decision support tools required.   | Section 10          |
| Forecasting the demand  | l for water  |                     |
| The population and housing growth forecasts are too high.   | The WRPG sets out that forecasts need to be based on local plans published by local authorities. We have followed the WRPG.  | Section 3           |
|   | We commissioned Edge Analytics to produce 25-year plan based population and property forecasts. Edge Analytics requested data from 95 local authorities in the Thames Water area. We followed the guidance set out in the UKWIR study "Population, household property and occupancy forecasting" on how to use available information.  |                     |
|   | We have defined a longer term planning horizon of 80 years for our WRMP and commissioned University of Leeds to develop forecasts, based on demographic data from 2045 to 2100.  |                     |
|   | We consulted the Environment Agency on the methodologies, responded to the Environment Agency's comments.  |                     |
| These forecasts are ambitious, are you producing estimates of uncertainty.                            | We recognise that there are uncertainties with all forecasts. We have taken account of uncertainty in the population forecasts, as well as other factors, through the use of scenarios.  | Sections 5 & 10     |
| The trajectory of the long term demand forecasts for London raised a number of points.                | We commissioned the University of Leeds to develop long term population forecasts. In April 2017 we published a paper produced by the University of Leeds explaining the high growth forecasts for the Thames Water region (Technical Stakeholder Meeting April 2017 Minutes). We then invited the University of Leeds to present the work (Water Resources Forum July 2017). There were a number of points of discussion around the projections in particular the strong influence placed on ethnicity in developing demand forecasts. We have asked the University of Leeds to respond to these points and this information is included in the WRMP. | Section 3           |
| There is a lot of uncertainty in developing forecasts over an 80 year period, and stakeholders raised | We have worked with the University of Leeds and the Greater London Authority, both experts in this area to develop demand forecasts over a longer term planning horizon to 2100. We recognise that there are uncertainties and account for these in the scenario   | Sections 3 & 10     |



| Issue  | TW response  | Section of the Plan       |
|--|--|---------------------------|
| a number of technical points which could significantly affect the forecasts.   | analysis. This was discussed at the November 2017 WRF.   |                           |
| Forecasting future wate  | r supply   |                           |
| Our model to estimate<br>the amount of water<br>available has been<br>challenged by GARD.  | Over the past two years we have invested in the development of an improved water resources management system model, WARMS2, which is used to assess DO. We engaged with the Environment Agency on the work completed to improve the model, and shared this work with stakeholders. We also commissioned independent industry experts, HR Wallingford, to review WARMS2 to ensure it was fit for purpose, and has committed to periodic audits. This is partly to provide assurance to this effect for external stakeholders. We will publish the reviews completed by HR Wallingford on the website www.thameswater.co.uk/wrmp   | Section 4 &<br>Appendix I |
| GARD has developed its own hydrological model. GARD has submitted numerous data requests from TW's model. There has been ongoing dialogue between GARD and Thames Water on the data, and the outputs of the respective models. | Following a request from an independent stakeholder, Wiltshire and Berkshire Canals Trust, we commissioned Dr Colin Fenn, an independent water resources expert to complete a review of GARD's model. The review was completed with the full support and participation of GARD. Dr Fenn highlighted the shortcomings of GARD's spreadsheet model and concluded that GARD's model should be used for screening purposes only and that detailed analysis should be undertaken using WARMS2. The findings were shared with GARD. As such we have not continued to provide WARMS2 output to GARD to populate its model given the shortcomings that were identified by Dr Fenn. | Section 4                 |
|  | In order to provide assurance to GARD and other stakeholders on the robustness of WARMS2 we commissioned independent hydrological experts, HR Wallingford, to complete an audit and review of WARMS2. This was undertaken for WRMP14 and again for WRMP19. We shared the output of this review with stakeholders in November 2017.   |                           |
| Assessing potential opt  | ions   |                           |
| Have we considered a sufficiently wide range of potential options  | We have consulted stakeholders on the range of options under consideration to ensure we had a comprehensive set of options. This process identified over 200 potential options. We also sought robust and up-to-date information on options on which to base our plans. Thames Water also engaged with stakeholders on the approach and methodology to appraise options, and the output of this as the work progressed. Thames Water updated the Phase 1 Fine Screening Report in response to comments from stakeholders.  | Sections 7 8<br>8         |
| Demand management o  | ptions   |                           |
| The assumed savings, the longevity of the savings, and the risk of   | Metering and water efficiency, which rely on changing customer behaviour, have a higher element of risk. We have based our future proposals on the best available  | Section 8                 |



| Issue  | TW response  | Section of the Plan |
|--|--|---------------------|
| delivery have all been discussed.  | information and will continue to assess and evaluate data to refine our understanding of the effectiveness of options and build this information into future plans.  |                     |
| Stakeholders and customers want an ambitious leakage reduction programme. Some stakeholders also challenged us as to whether it was planning to meet the aspirational target set by Ofwat to reduce leakage by 15% over the next five years. | Over the next five years the WRMP is focused on the efficient use of resources, supported by new resource development. We are aiming to reduce leakage in line with customer aspirations over a 15 year period. This proposal is based on past experience and as such we consider this to be deliverable, affordable to customers and will provide a sustainable reduction in leakage. It is a more efficient investment of customers' money as the roll out of the progressive metering programme over the next 15 years will help to enable more efficient targeting of leakage control and repair activity. | Section 8           |
| We need to clearly present the evidence and decision making underpinning its proposed leakage programme  | In determining the scale and pace of the leakage reduction programme there is an important balance between leakage reduction, disruption to London, and affordability for customers. We have presented the information supporting the strategy in the draft WRMP.  | Sections 8 & 10     |
| Resource options   |  |                     |
| Are there sufficient options for consideration in the constrained option list  | There are sufficient options available, the issue is timing and when the water can be made available.  | Section 7           |
| Assessment of options  | We published Resource Option Feasibility Reports and screening reports for comment in Autumn 2016. We received over 300 comments and responded to the comments received and published in stakeholder comment logs in February 2017. We published a revised.  | Section 7           |
| Splitting options into elemental parts is unclear.   | We have adopted an approach whereby the resource, transport of the water, treatment and distribution have been assessed as component parts of an overall scheme. Schemes can comprise different components. As such this modular approach provides flexibility. This is clearly explained in the WRMP.   | Section 7           |
| STT – under-estimation<br>of the volume of water<br>available (GARD)   | GARD has challenged the assessment of DO of the STT options at several Technical Stakeholder Meetings. Thames Water responded in the meetings, and then formally in writing (27 October 2017) setting out that United Utilities (UU) confirmed that 180 Ml/d is the reliable yield from Lake Vyrnwy.   | Section 7           |
| STT – Regulatory<br>issues around losses<br>and regulation of the<br>River Severn  | Discussions are ongoing with the Environment Agency, NRW, United Utilities and Severn Trent regarding several aspects of the Vyrnwy scheme. Important points under discussion are: the volume of losses and the type of licence required. Thames Water has commissioned HR Wallingford to review the potential losses from the scheme. The output of the further work was presented to   | Section 7           |



| Issue  | TW response   | Section of the Plan |
|--|---|---------------------|
|  | stakeholders and GARD requested a copy of the full report which was provided (April 2018).  |                     |
| Raw water transfer – use of restored Cotswold canals for conveyance              | We have undertaken extensive engagement with the Cotswold Canals Trust (CCT) to explore the feasibility of the restoration, and then use, of the canals to transfer water. We commissioned NE to provide a regulatory view of the transfer of INNS. This concluded that the transfer of water via canal would present a higher risk of the spread of INNS. Based on this, as well as cost, operability and deliverability we have not taken forward transfer of water using the canals. We have considered the additional information provided by CCT and the assessment is reported in the updated Resource Option Fine Screening Report and the Raw Water Transfer Report.  | Section 7           |
| Consideration of the<br>Severn railway tunnel<br>"Great Spring" option<br>(GARD) | Welsh Water has set out that it will assess its own needs to ensure security of supply for its customers and will then provide information on the potential resource that is available. Thames Water and Welsh Water have had ongoing dialogue about opportunities and Welsh Water has indicated its intention to offer a water transfer to Thames Water and this information will be taken into account in the revised draft WRMP19.   | In progress         |
| Reservoir – Flawed<br>assessment of the<br>resilience to drought<br>(GARD)       | Challenge to the technical assessment completed on the resilience of the proposed reservoir to drought. We have responded to the challenges put forward to the technical assessment. To ensure these challenges are fully addressed we have commissioned additional work on the selection of droughts and has requested feedback from GARD, and other stakeholders, on the methodology. The aim with this approach is to ensure there is consensus to the approach, analysis, and therefore conclusions of the study. A technical meeting was held in January 2018 at which a revised methodology was agreed by all stakeholders present, with the exception of GARD. GARD's comments on the original methodology were addressed in the revised methodology. Atkins has completed further work using the agreed methodology; this has been reported in the Statement of Response. | In progress         |
| Opportunities for reuse in the Thames Valley (GARD)                              | GARD has proposed an option to enable further reuse of water in the Thames Valley. We reviewed the information presented. We met the Environment Agency to discuss the option. We do not consider the option to be feasible for the draft WRMP19 and we provided the reasons for this decision in a letter to the EA and also provided to GARD (20/11/17).  | Section 7           |
| Further consideration of<br>the unsupported<br>Severn-Thames transfer            | The unsupported transfer was rejected because of the poor resilience in drought conditions of this option. In response to challenges raised by GARD, we commissioned Atkins to complete further assessment of flow sequences, impacts of climate change and an extended library of droughts generated using a stochastic approach. We confirmed that, based on the additional evidence provided by Atkins, the unsupported transfer is not considered to be resilient and therefore has been  | Section 7           |



| Issue  | TW response  | Section of<br>the Plan |
|--|--|------------------------|
|  | screened out (Technical Stakeholder Meeting, April 2017 and WRMP19 Resource Option Development Feasibility Report Status Update Note, April 2017).   |                        |
| Unjustified rejection of the Lower Lee direct abstraction option   | We completed work to investigate the Lower Lee direct abstraction option. The option has been rejected in preference to Deephams reuse. We reported the findings at the April 2017 Technical Stakeholder Meeting. The reasons were reiterated in a letter to GARD (27 October 2017)  | Section 7              |
| Teddington transfer - a number of concerns have been raised including the impact on the flow, water quality and ecology. | We have commissioned detailed studies to examine the likely operation of the scheme and the hydrological and ecological issues for the freshwater and Tidal Thames to respond to issues raised. We continue to engage with Environment Agency, NE and Port of London Authority to share the results of the studies and ensure issues of concern are fully addressed. Following publication of the draft plan it was agreed between Thames Water and the Environment Agency that Teddington DRA would not be taken forward as a feasible option until their environmental concerns were fully addressed. This is reported in Appendix K to the Statement of Response. | Section 7              |
| Catchment<br>management (CM)<br>options are not<br>ambitious and require a<br>broader focus                              | We have reviewed opportunities for CM and published a feasibility report in September 2016. CM can improve resilience of water resources, but provides limited DO benefit between 0.4-2 Ml/d per scheme. Furthermore there is a long lead time for providing the benefit. As such we are not proposing to include any CM in the draft WRMP but will include CM schemes in the Business Plan. We presented this to the Environment Agency (September 2017) and sought comment, and to the November 2017 WRF.  | Section 7              |
| Is there an upper limited to the amount of reuse and desalination that could be carried out in the Tideway               | In response to stakeholder concerns raised regarding the potential environmental impact, we commissioned Ricardo to complete an assessment of the cumulative effects of reuse and desalination in relation to the potential risks of increased salinity. We sent the report to attendees at the November 2017 WRF.   | Section 7              |
| Developing the program   | nme  |                        |
| Stakeholders have raised concerns about the transparency of the programme appraisal decision making process              | We use complex models and tools to aid decision making. We have appointed an Expert Panel who have worked alongside us to review the process to produce a shortlisted set of programmes and decide on a preferred programme. The Panel comprises a range of experts with different areas of specialism and who, through dialogue, arrive at a balanced view. The Chair of the Panel presented to stakeholders to confirm the approach (Water Resources Forum, July 2017). Furthermore we have asked the Panel to produce an independent report on the process and outputs which was published as part of the WRMP.   | Section 10             |
| The use of metrics, their composition and data   | Stakeholders and customers support the development of a best value plan. The definition, and use of metrics allow consideration of a range of factors in the decision making   | Section 10             |



| Issue  | TW response  | Section of the Plan |
|--|--|---------------------|
|  | process. The scope of each metric, the source data and information and how this has been used has been explained to stakeholders at Technical Stakeholder Meeting (March 2016, November 2016 and July 2017).   |                     |
| The use of a numerical system for the environmental metric   | The purpose of having an environmental metric is to ensure environmental assessment can be reflected in programme appraisal modelling alongside other information such as cost and resilience. We have worked with Dr Bill Sheate, an environmental expert, to define the environmental metrics, the source information and application of the metric.   | Section 10          |
| Environmental metric -<br>Numerical assessments<br>of scores can cancel<br>each other out                            | The environmental metric is separated into beneficial and adverse effects to avoid this. This was agreed with Dr Bill Sheate, an environmental expert.   | Section 10          |
| The opportunity to participate in the review and selection of programmes   | The Environment Agency has queried the extent to which stakeholders can participate in the programme appraisal process. In response, we have explained that it is not feasible to undertake co-creation with stakeholders. We held a workshop to present the decision making tools in detail to the Environment Agency, explained how the tools will be used, and also how the Expert Panel will work alongside us to provide challenge and independent scrutiny. We have also presented in the WRMP the alternative programmes considered and the decision making process completed to determine the preferred plan.  | Section 10          |
| Considering future scen  | narios   |                     |
| How will you give considering to the range of uncertainties and how will you monitor and adapt your plan in response | We are developing an adaptive plan, this includes lead times for different elements and we will have a monitoring plan to assess the reality of assumptions. This will then feed into the review of the WRMP every five years.   | Section 10          |
| Assessing the environm   | nent   |                     |
| Sufficient consideration of the potential environmental and social impacts of the WRMP                               | We have developed an approach to assess, and take account of, environmental and social impacts which has SEA at the core and incorporates the statutory assessment processes relating to the Habitats Directive (HRA process) and WFD. We consulted stakeholders on the methodology for the SEA, and the SEA Scoping report (June-September 2016). We have also consulted statutory bodies on the HRA and WFD methodologies. We published our response responded to the issues raised in the SEA Scoping Report Statement of Response (May 2017) and held a meeting with stakeholders to discuss environmental assessments (June 2017) at which stakeholders were broadly support of the approach, with some suggestions for modifications (June 2017 Technical Stakeholder Meeting minutes) | Section 9           |
| Consideration of the use of a Natural Capital  | Government and a number of environmental organisations have promoted the use of the NCA  | Section 9           |



| Issue  | TW response   | Section of the Plan |
|--|---|---------------------|
| Accounting (NCA) approach to environmental valuation (Environment Agency, NE and Rivers Trust)   | approach to support the development of the WRMP. In response we commissioned Cascade/Vivid Economics to consider how NCA could be used to support WRMP19. This review concluded that there is insufficient industry-specific guidance and a continuing lack of high quality appropriate valuation data to allow us to produce a full, consistent and robust NCA for this plan.  |                     |
|  | We presented this to the Environment Agency and stakeholders who were satisfied that we had given this due consideration and will continue to review and develop this in the future.  |                     |
| For water resources planning, we expect companies to complete as a minimum the intermediate appraisal (i.e. qualitative and quantitative appraisal, sensitivity analysis and conclusions in context). Monetising the impacts is optional | We considered the monetary valuation of environmental and social effects (E&S costs) and concluded that this did not add value to the assessment. As the source information for the other costs is of variable quality and not consistent, furthermore it makes a relative minor contribution to the overall costs and can introduce double counting. We shared this with stakeholders, who broadly agreed that we should not take monetisation forwards, with the exception of carbon. | Section 9           |
| Environment Agency<br>and NE queried at what<br>stage mitigation<br>measures would be<br>considered in SEA   | We prepared a paper (December 2016) which set out how it proposed to consider and assess effects after mitigation. We held a meeting to discuss the approach and to confirm the approach was acceptable. The agreed output was that we prepare tables which set out the impacts/risks and what mitigation has been assumed in the scheme design and costs. The SEA reports the residual effects significance (i.e. taking account of the mitigation assumed in the scheme design).      | Section 9           |
| Stakeholders raised a<br>number of comments on<br>the option level SEA<br>assessments shared at<br>the Technical<br>Stakeholder Meeting<br>(June 2017)   | The comments raised are recorded in the minutes of the Technical Stakeholder Meeting June 2017. Ricardo have taken account of all the comments raised and address these in the finalisation of the SEA assessments which are published as part of the draft WRMP in January 2018.   | Appendix B          |
| Other  |   |                     |
| Rather than acting as a donor to other companies, why can't Thames Water be the recipient of water   | If another company can develop a new water resource more cheaply than us doing so then this is taken forwards for consideration in our Plan. We have received a number of commercial proposals to provide water.  | Section 7           |
|  | The purpose of WRSE is to consider a wide range of options which could provide the best solution(s) for the wider region. Regulators have a keen interest in WRSE and are participants in the process.  |                     |



# F. Public consultation

- S.60 We sent our draft plan to the Secretary of State for Environment, Food and Rural Affairs on 1 December 2017. We also provided a statement certifying that the draft plan did not contain any information that would compromise national security interests or was considered to be commercially confidential.
- S.61 We held a stakeholder meeting on 5 February 2018 to brief stakeholders on the draft plan and raise awareness of the forthcoming public consultation, encouraging interested parties to give their feedback on the draft plan.
- S.62 We received notification from Defra on 7 February 2018<sup>8</sup> that we could publish the draft plan for public consultation. Defra also sent an annex to the letter which set out a number of matters that needed to be addressed in the further development of our draft plan including demonstration of how we will embed the environmental net gain principle, undertake meaningful and effective engagement with our customers and ensure our Board is fully involved in any decisions taken during or as a result of the consultation.
- S.63 We started the public consultation on 9 February 2018. The consultation was open for over 11 weeks, closing on 29 April 2018. The end date aligned with the consultation on our draft Business Plan.
- S.64 We produced a suite of documents to ensure information was accessible to all interested individuals and organisations:
  - An overview document a high level summary setting out the challenges, the approach we followed in developing the plan and the preferred programme, and the reasons for this
  - A technical executive summary a detailed summary of the plan with signposts to relevant sections of the detailed technical documentation
  - The full technical report which comprised 11 sections and 26 appendices
- S.65 We published the draft WRMP19 on our website <a href="www.thameswater.co.uk/haveyoursay">www.thameswater.co.uk/haveyoursay</a> and we made a paper copy available to view throughout the consultation period, by appointment, at our offices in Reading. We also made available copies of supporting technical documents that we could not publish on our website due to security restrictions.
- S.66 We sent an email to all statutory consultees, stakeholder organisations who had participated in our water resources stakeholder forums, stakeholders who participated in the public consultation on our previous plan (WRMP14) and stakeholders and individuals who had expressed interest in the WRMP. We provided a link to the draft WRMP19 and details of how to participate in the public consultation.
- S.67 We promoted the consultation using a variety of methods, and engaged on the draft plan in coordination with the Business Plan to ensure clear communications for customers and stakeholders.

<sup>&</sup>lt;sup>8</sup> Letter from Dr Sebastian Catovsky, Head of Water Services, Defra to Thames Water, 7 February 2018



- S.68 Consultees could submit responses through a range of channels including emailing or writing a freeform response, responding to an online survey or completing a hard copy feedback form.
- S.69 During the consultation period we held eight Local Engagement Forums in areas where specific issues had been identified linked to the WRMP and/or the Business Plan: Abingdon, Beckton, Beddington, Bicester, Bracknell, Cirencester, Richmond and Stevenage. The forums were evening events which gave local communities and customers an opportunity to hear about our future plans and raise points that they wanted taken into consideration.
- S.70 We held drop in events at Oxford and Steventon; we had previously held drop in events at Steventon and had committed to continue to engage and update the local community on our plans. We also attended a number of Parish Council meetings in Oxfordshire and presented at the Abingdon Town Council meeting.
- S.71 We hosted a stakeholder meeting in March 2018 to provide an opportunity for stakeholders to ask us questions and seek clarification and further information before submitting their responses to the consultation on our draft WRMP19.
- S.72 We engaged with our customers through roadshow events at shopping centres and through our online community and we held four deliberative research events.
- S.73 We asked for feedback from customers using our innovative interactive engagement tool on aspects of our WRMP, namely planning for a resilient water supply and leakage.
- S.74 Table S-10 presents the number of responses received by each channel.

Table S-10: Number of responses received to the public consultation and channel for response

| Channel           | Number of responses   |
|-------------------|---|
| Email or post     | 440 (82 written and 358 email)  |
| Online            | 93  |
| Feedback form     | 8   |
| Customer research | 75 deliberative workshop participants 174 online community responses 2,652 responses to the "Shape Your Water Future" engagement tool |

- S.75 We reviewed all the feedback received from stakeholders and customers.
- S.76 We held one-to-one meetings with Government departments, other water companies and regulators to discuss issues of concern, policy objectives and comments raised in representations to ensure we fully understood the issues and could address them properly.
- S.77 We have prepared a document called the Statement of Response, which sets out our consideration and response to the comments received. We published this in September 2018. We had originally intended to publish the document on 10 August, within 26 weeks of the start of the consultation. However in view of the number and detail of the responses received to the



consultation, and the importance in co-ordinating with the other water companies in the South East and nationally to ensure alignment, we agreed a later publication date with Defra<sup>9</sup>.

#### S.78 The Statement of Response:

- presents the comments received during the public consultation and our consideration of the comments
- sets out changes made to the draft WRMP19 as a result of comments
- where changes have not been made as a result of comments, we have explained why not
- describes other relevant changes that have occurred during the consultation period and how these have affected parts or the whole of the plan
- S.79 We worked with Community Research, an independent research and consultation specialist agency, to ensure the approach we adopted, the materials published, and the analysis undertaken were robust and fair. Community Research has prepared a separate report<sup>10</sup> on the consultation and the main issues arising to give confidence to all stakeholders that the process followed was fair and transparent. This report has been published alongside our Statement of Response.

### G. Further consultation

- S.80 We revised the draft WRMP19 in response to representations received to the public consultation and new information. There are several major changes to the draft plan, namely changes to the long-term population forecasts, our proposals to reduce leakage and removal of a new resource scheme called Teddington Direct River Abstraction from further consideration.
- S.81 In recognition of the changes that were made to the draft plan we undertook a period of further public consultation for 8 weeks from 3 October to 28 November 2018. The purpose of the further consultation was to provide an opportunity for stakeholders to comment on the revisions that we had made to our draft plan. We worked with Community Research to ensure the approach we adopted, the materials published, and the analysis undertaken were robust and fair.
- S.82 We contacted all respondents to the consultation to make them aware of the changes and the reasons for the changes, all organisations and individuals who were originally invited to participate in the consultation and engaged with communities and stakeholders who may be impacted by the changed plan in ways that were not the case with the draft plan.
- S.83 We published the revised draft WRMP19 with major changes clearly highlighted in the document. We also publish a summary document to clearly highlight what the changes are, as compared to the draft, why they have been necessary / how they came about, and their expected significance / impact.
- S.84 We publicised the further consultation through a number of channels and sought feedback in writing (email, letter or feedback form) or via an online survey.

<sup>&</sup>lt;sup>9</sup> Letter from Defra to TW, 31 July 2018

<sup>&</sup>lt;sup>10</sup> Community Research, Consultation on draft WRMP19, August 2018



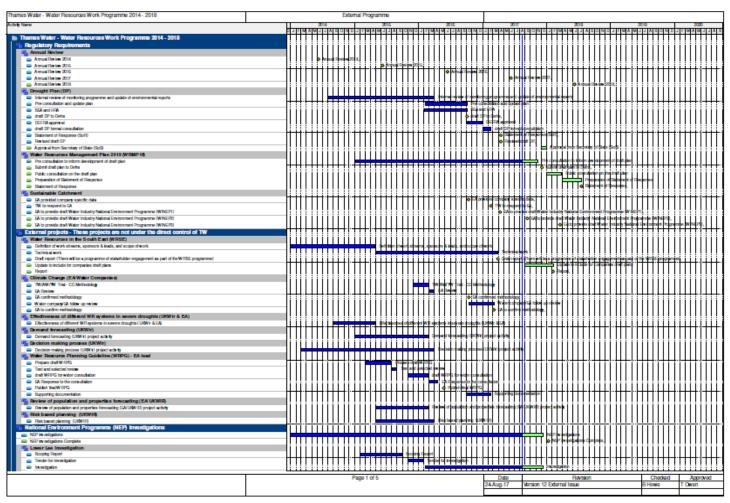
- S.85 Overall, we received 751 responses, around half of the responses were written responses and half were via the online survey. In addition, we undertook research with our customers to seek the views of our representative customer base.
- S.86 Following the consultation period we worked with the EA to review all the issues raised in their representation. We have continued to work closely with Affinity Water, the WRSE Group and other water companies in regional planning groups, to ensure effective collaboration and alignment between company's plans. We have also met a number of other organisations to discuss issues of concern. We have continued to engage with our Customer Challenge Group and have completed further research with customers to explore planning for enhanced resilience to drought and protection of vulnerable chalk streams and water courses.
- S.87 We have reviewed all the feedback received from stakeholders and customers and have prepared a document called the Statement of Response No 2, which sets out our consideration and response to the comments received. We published this in April 2019 and sent a summary document and link to everyone who participated in the further consultation. We also published updated sections of our revised draft plan on our website www.thameswater.co.uk/wrmp. We also sent it to the Secretary of State for consideration of the next steps.
- S.88 More detailed information on the further consultation, the process followed, the responses received, and our consideration of the points is presented in Statement of Response No 2.

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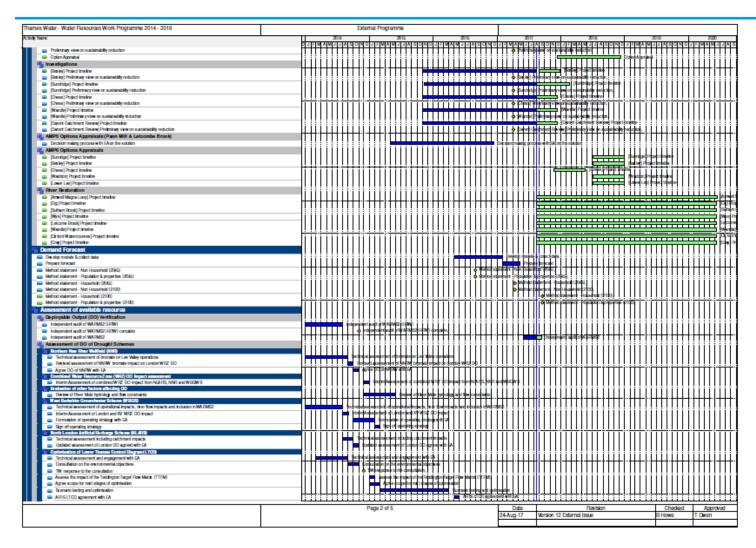


## **Annex S1: Work programme published August 2017**

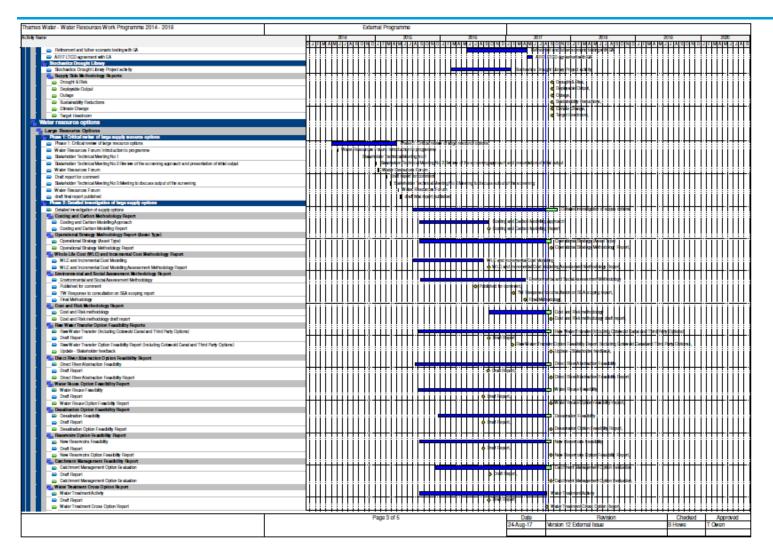
Figure S-2: Work programme published August 2017



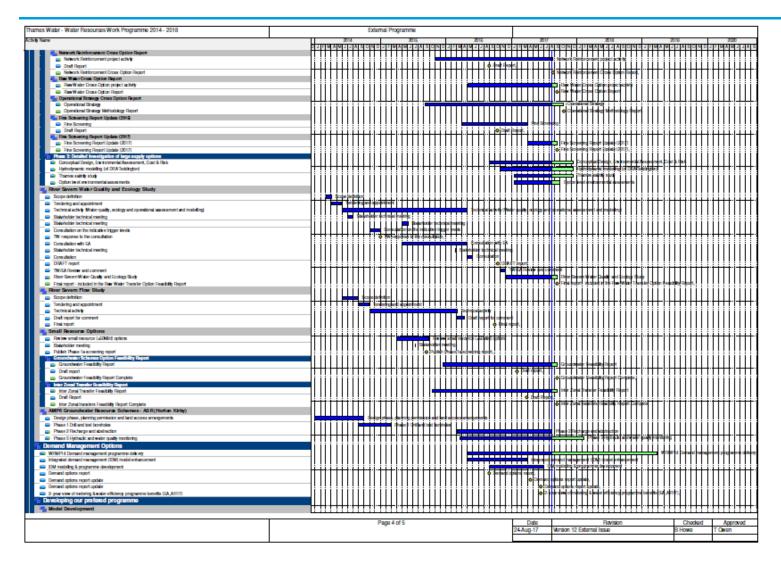




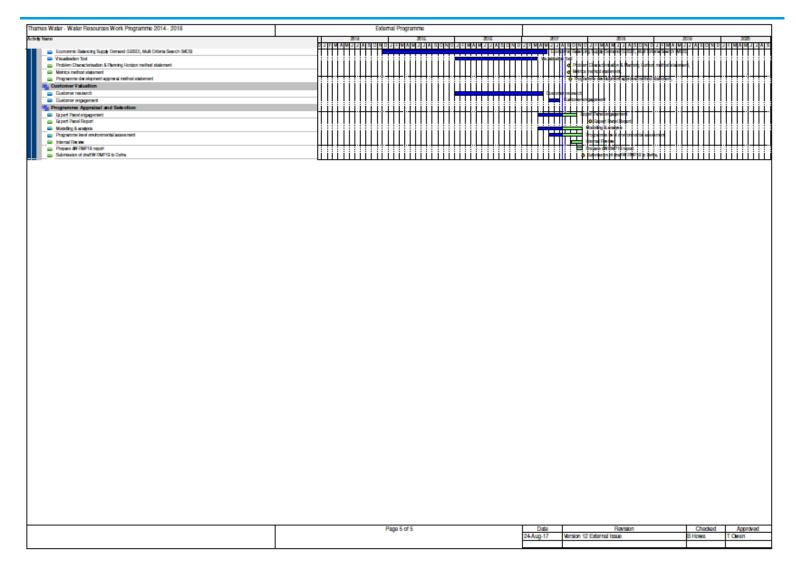














## Annex S2: Water resources work programme report published August 2017

Thames Water: Water Resources Work Programme 2014 - 2018

Date: August 2017

#### Introduction

The purpose of this report is to accompany the Water Resources Work Programme 2014 to 2018 and to provide a summary of the main work areas and projects. The report is based on the best available information and will be reviewed and updated quarterly. Updates since the May 2017 report are provided. A stakeholder statement of engagement has also been prepared to accompany the programme.

#### **Section 1: Regulatory Requirements**

There are 3 regulatory submissions with respect to water resources; these are 1) Annual Review (AR); 2) Drought Plan (DP); and 3) Water Resources Management Plan (WRMP19).

Since May 2017:

- AR: The review for the period from April 2016 to March 2017 has been completed; it provides
  a progress report on performance and annual performance data. We provided this to the
  Environment Agency (EA) in July 2017 and published it on our website
  https://corporate.thameswater.co.uk/About-us/Our-strategies-and-plans/Waterresources/Our-current-plan-WRMP14.
- **DP:** We completed a public consultation on our draft DP (5 January 17 February 2017). We received 11 responses to the consultation. We prepared a Statement of Response to the responses received and submitted this with a revised draft DP to Defra in April 2017. We are waiting for feedback from Defra prior to publishing our final DP.
- **WRMP19:** We are continuing work to develop our draft WRMP19. The work programme provides an update on the key work streams. We have engaged with regulators and stakeholders as we have undertaken this work. The draft WRMP19 will be submitted to Defra on 1 December 2017.

#### Section 2: External projects

A number of external technical projects have been completed to refine approaches to water resources planning including projects led by UKWIR, WaterUK and the EA. The work programme has been updated based on the best available information.

We continue to work with Water Resources in the South East (WRSE), a collaboration of water companies, located predominantly in the South East of England, and regulators. The objective of WRSE is to develop a flexible and robust water resources strategy for the region. WRSE has completed modelling to investigate the resilience of the region to a range of possible futures. The modelling has highlighted the vulnerable zones in the region, considered opportunities for transfers and greater connectivity to share resources across the region, and identified potential regional infrastructure investment. The output has been reviewed and commented on by WRSE members and it is intended that the output will be used to inform individual water company's plans.



#### Since May 2017:

In July we requested that companies set out their future requirements, we have received information and will use this in the development of draft WRMP19. There are uncertainties in the data and we will address these through scenario analysis.

#### Section 3: National Environment Programme (NEP) Investigations

The EA publish a National Environment Programme (NEP) which defines the sustainability reductions (SRs) that may be required to ensure protection of the environment. SRs are reductions in existing abstraction licences that are identified to provide environmental improvements, typically through increased flows in rivers. Water companies work closely with the EA to identify where abstraction may be having an adverse environmental impact and then put plans in place to address this impact, where necessary to do so.

The studies that are underway are set out in the programme. The main investigation is on the Lower Lee. The investigation started in February 2016 and we are working closely with stakeholders at it progresses. Options appraisals are also underway at Pann Mill, Letcombe Brook, Sundridge, Waddon, Darent and Cray. These investigations are due to complete by the end of 2017.

#### Since May 2017:

• In March 2017 the EA provided information on sources likely to be subject to SRs and advised that this information should be used in the development of the baseline supply demand forecast for WRMP19. Broadly the reductions were as expected, with the exception of the large reduction proposed on the Lower Lee of 125 Ml/d. The SRs identified by the EA are uncertain and therefore will not be included within the baseline supply demand balance forecasts. Instead the potential impacts of these licence reductions will be examined through sensitivity testing and scenario analysis of our draft WRMP19 preferred plan.

#### **Section 4: Demand forecast**

We have used recent UKWIR studies on forecasting household demand and developing population and property forecasts to inform our approach to develop the baseline demand forecasts. We have used data from the Local Authorities in our area to inform population and housing forecasts over the next 25 years and worked with the University of Leeds to develop the longer term population forecasts. We have produced method statements setting out the approach to develop household (to 2045) and non-household (to 2100) forecasts. We will publish the remaining method statements, on long term housing and population forecasts, in Autumn 2017. We presented this work to stakeholders at the Water Resources Forum in July 2017.

#### Section 5: Assessment of available resource

We have an improved water resources management system model, WARMS2, the tool we use to assess deployable output (DO). The tool has been reviewed by recognised independent industry experts, HR Wallingford, and we have commissioned periodic audits to ensure the model remains fit for purpose, and to provide assurance to this effect for external stakeholders.

The 2010-2012 drought exposed potential weaknesses in the existing regulatory guidance for assessing the resilience of water supply systems and that perturbing the historic record of rainfall and evaporation may not adequately reflect how the system might respond to more intensive droughts than those which have occurred in the historical record. Atkins completed work to



investigate prolonged droughts, adopting a stochastic based forecasting approach, and developed stochastic drought libraries for both the River Thames and Severn catchments. This work was used in the draft DP to assess our resilience to more extreme drought events than occurred in the available historical record and has been used to assess the reliable yield of new surface water resource options in the draft WRMP19.

#### Since May 2017:

 We have produced several method statements on aspects of the baseline supply forecast including outage and climate change. We have provided these to the EA for comment and will publish these as part of our draft WRMP19 in 2018.

#### **Section 6: Water Resource Options**

In WRMP14 we set out that a new large resource scheme (>150 Ml/d), or combination of schemes, is required to maintain security of supply in the region from the mid-2020s. In Autumn 2014 we started a programme of work to examine resource schemes. The programme comprises multiple phases and we are working with regulators and stakeholders as we progress this work.

#### Since May 2017:

- Feasibility studies and screening assessments: We sought comments from stakeholders on work completed to examine feasible resource options (Feasibility Reports), and decisions to screen out options to produce a constrained list of options (Fine Screening Report) in Autumn 2016. We responded to these comments in February 2017. Since then we have completed further work in response to the comments and also undertaken further studies as needed. In April 2017 we published a note to update stakeholders on progress with these studies. We also completed further work on the constrained list of options and published an updated fine screening report in April 2017. We discussed this work at a Technical Stakeholder Meeting held in April 2017 and provided an opportunity for further comment. We will take account of these further comments and will publish final reports in Autumn 2017.
- Teddington transfer: We are examining an option to increase abstraction upstream of Teddington Weir supported by transfer of tertiary treated effluent from Mogden sewage treatment works. Detailed modelling is underway to examine hydrodynamic, navigational and environmental impacts of this option. Discussions are continuing with the Port of London Authority, EA and NE on this work to ensure we understand and address issues of concern and develop mitigation actions as needed.
- Raw Water Transfer: There are ongoing discussions on the various options to transfer water from the River Severn catchment into the Thames catchment. A summary of the status of raw water transfer is noted below:
  - We have screened out the stand-alone unsupported transfer (UST) due to the low reliable yield and as such the option is not cost effective.
  - We have screened out conveyance via the Cotswold Canals due to significantly higher cost, greater operational and construction complexity, and the increased risk of spread of non-native invasive species compared to pipeline conveyance.
  - Supported transfers of capacity 300-400 MI/d have been shown to be the most cost effective.
  - We have completed work to confirm the DO of supported 300, 400 and 500 Ml/d pipeline transfer with discharge at Culham based on the stochastic flow series.
  - Following discussions with the Canal and Rivers Trust we are developing options to transfer resource via the Oxford canal or the River Cherwell for abstraction further downstream and transfer into Farmoor reservoir.



- We are continuing to engage with United Utilities, Severn Trent Water and Welsh Water on the detail of feasible transfer options.
- A River Severn catchment working group has been established to address issues linked to sharing and transfer of resources, for example consideration of losses from transfers.
- Upper Thames Reservoir (UTR): As reported in February, Abingdon has been identified as
  the preferred site for a reservoir. We have engaged with Parish Councils in the vicinity of the
  reservoir to update them. We have held community meetings in Abingdon and Steventon in
  June and July 2017 respectively to provide the opportunity to discuss the WRMP and reservoir,
  and wider water and wastewater issues.
- Assessment of Cumulative Effects of Re-use, Desalination and Direct River Abstraction
  options: We are considering a number of options in the Tideway area. The EA raised concerns
  about the cumulative impact on the salinity of the estuary. The study has assessed potential
  cumulative tidal level and salinity effects of combinations of options in the mid-Tideway. This
  work was shared with stakeholders in April. Further work will be undertaken as part of the
  programme level Strategic Environmental Assessment if multiple Tideway based options are
  chosen through programme appraisal.
- System perspective: We are undertaking work to consider the development of new infrastructure capacity within the wider water treatment and network system and briefing stakeholders as this work is progressed. We will present this work in the WRMP and Business Plan.

#### **Section 7: Demand Management Options**

We are implementing a large programme of demand management activity from 2015 to 2020, comprising leakage reduction, metering and the promotion of water efficiency. The programme is planned to deliver approximately 107 Ml/d of savings. We are monitoring this programme as it is rolled out to ensure we are taking this learning into account in planning future activity.

Since August 2016 we have undertaken work to develop the demand management programme for WRMP19. We have considered a wide range of demand management options and screened the options to produce a shortlist of feasible options. We have engaged with stakeholders throughout this work. In March 2017 we published an updated screening report, including comments from stakeholders, and set out the final constrained list of feasible options. The options are categorised into five areas; Metering, Water Efficiency, Leakage, Incentive Schemes and Non-potable options. We also published papers on the feasible options.

#### Since May 2017:

- In June 2017 we held a Technical Stakeholder Meeting to provide an update on this work. We set out the costs and benefits of the feasible options and sought feedback from stakeholders on these.
- We are currently focused on modelling the demand management options to develop optimised demand management portfolios to input to the programme appraisal decision support tools alongside the resource options.

#### Section 8: Developing our preferred programme



In the formulation of our preferred programme for WRMP14 we used the least cost planning tool (EBSD), complemented by a stepwise programme appraisal approach, and with sensitivity analysis to ensure future uncertainties were fully understood and considered. We recognised that there were shortcomings with this approach, not least future uncertainties, and over the past 2 years have explored more sophisticated models and decision support tools to enable a wider set of considerations to be taken into account to inform strategic decision making. These include multicriteria performance assessment, the use of a wide variety of performance metrics and adaptive planning.

We have briefed stakeholders on this work as it has developed (September 2015 Water Resources Forum and technical stakeholder meetings in March 2016 and November 2016) to ensure awareness and understanding, and gain feedback. We have also engaged with customers on this. Overall stakeholders and customers stated their support for a best value planning approach.

#### Since May 2017:

- We presented an update on programme appraisal at the July 2017 Water Resources Forum
  and circulated a briefing note ahead of the meeting, this is available on TW's website. We
  started programme appraisal in May/June. The decision support tools will generate a large
  number of potential investment programmes which will be optimised in terms of cost, but also
  with consideration other parameters (referred to as metrics), including resilience,
  environmental effects, customer preference and deliverability, to ensure a best value
  programme is taken forwards.
- We have developed a new tool, Polyvis, to show how the programmes perform against the variety of metrics, aiding transparency of the process. We have presented the tool to the EA to ensure understanding, and confidence in the tool and its application.
- We are working with an appointed panel of experts to review the potential programmes and
  determine a preferred programme. Since June we have shared output from the programme
  appraisal with the Panel and sought their input and feedback as part of an iterative process.
  The Expert Panel will produce a report on its work which will be published alongside the draft
  WRMP19.

#### Section 9: Engaging with our customers

Our plan must reflect the preferences and priorities of our customers. We are undertaking a programme of engagement with customers to seek their views on our services overall and specific topics in more detail, including water resources. The output from this will be taken into account in developing our preferred programme. We sought feedback from stakeholders on the approach and materials at the July and October 2016 Water Resources Forums and are engaging with the CCG as we progress this work.

#### Since May 2017:

- Research work has been completed to understand customer views on a range of topics including resilience, being a good neighbour, inter-generational equity, water resources and leakage. The output has been used in the development of a customer preference metric to be used in programme appraisal, and will also be used to inform the Business Plan.
- During May, June and July we hosted a series of events across the Thames Water region to engage with local communities on our future plans and to gain insight into their views, priorities and concerns for water resources and wider business services.
- We are planning further engagement and consultation on our draft plan in early 2018.



## Annex S3: Stakeholder engagement programme published August 2017

Thames Water: Water Resources Stakeholder Statement of Engagement

Date: August 2017

#### 1. Introduction

We recognise that there is wide interest in the sustainable management of water resources and we are engaging with regulators, stakeholders and our customers as we develop our long term strategy on water resources. This approach will ensure that all interested stakeholders have an opportunity to input and contribute to the development of the strategy.

This document is our statement of Water Resources Stakeholder Engagement which sets out how we will to continue to engage with regulators, stakeholders and customers as we prepare our draft WRMP19 to ensure that they understand the work that we are doing, and have an opportunity to input to the strategy.

#### 2. Approach

The main components of engagement are set out in the Engagement Framework contained in Table 1. This Framework sets out how we will continue to engage with regulators, stakeholders, neighbouring water companies, third party organisations and customers.

**Table 1 Engagement Framework** 

| Customers           | We will engage with customers to understand their views on a range of water resource matters and ensure these are taken into account in developing our plan. This will be aligned with engagement activity to inform the Business Plan.   |
|---------------------|---|
| Customers –<br>CCG  | The CCG was set up to test the quality of our engagement with customers and how we responded to their priorities in developing our Business Plan 2015-2020 and WRMP14. We are continuing to work with the CCG as we progress work to inform our next Business Plan and WRMP19.  |
| Regulators –<br>EA  | We will hold regular meetings with the EA to discuss water resources matters. The purpose of these meetings is to discuss technical work and to ensure the EA has the opportunity to raise concerns, contribute to the work, and to agree approaches and technical methods where required.  Each quarter we provide a progress report on the water resources work programme to the TW/EA Directors' meetings. The purpose of the report is to highlight any risks or issues on water resources that require discussion. |
| Regulators - All    | We will hold meetings with other regulators (Ofwat, CCWater, NE, Historic England (HE), NRW on specific topics as appropriate to ensure they are updated on technical work and to give them the opportunity to raise concerns and contribute to the work.   |
| Regulators –<br>All | We are involved in a number of research, technical and strategic projects such as the WRSE Group, UKWIR research, EA technical projects and the industry wide Strategic Water Resources Liaison Group. Regulators and other organisations are involved in the majority of these groups.   |



| Stakeholders Stakeholders                    | We will continue to hold forums on a regular basis to which all interested organisations are invited. The purpose of the forums is to update stakeholders on our work and to give them the opportunity to discuss and challenge our approach and to highlight issues and concerns. The agenda for these forums will be aligned with the work programme and also in response to feedback from stakeholders. We regularly review the approach to engagement and seek feedback at the forum to ensure the approach is meeting the needs of stakeholders. A list of the organisations whom we invite to the stakeholder forum is provided in Annex S4. More detail on how the forums will continue to operate is contained in Attachment S3-1 below.  We will continue to convene technical meetings on specific topics that |
|--|--|
|  | stakeholders are interested in. These meetings will give stakeholders the opportunity for greater discussion and scrutiny on specific technical matters. More detail on how the sub-forums will continue to operate is contained in Attachment S3-1.   |
| Water companies and commercial organisations | TW will continue dialogue with water companies and external organisations to identify opportunities for collaboration and partnerships including identification of opportunities for sharing and trading resources to ensure the most effective use of available resources.  |

#### 3. Forward programme

We have published our Water Resources Work Programme and accompanying report which set out the work that we intend to undertake on water resources from 2014 to 2018. The purpose of the work programme is to set out the component activities and to provide information on the timeline of activity and opportunity to review and comment on the work. This is intended to help regulators and stakeholders to identify areas of work which are of interest and to set out the timeline for activity and opportunities for engagement. The work programme is based on the best available information, the programme will be updated quarterly with new and updated information.

We will use the Water Resources Work Programme to guide the agenda for meetings with regulators and stakeholders. We will also seek feedback from regulators and stakeholders on topics that they would like covered at meetings to ensure it is addressing the topics of most interest.

Draft agendas for monthly meetings with the EA and stakeholder forums are presented in Tables 2 and 3 respectively. These will be reviewed and updated to align with the developments in the work programme and in collaboration with the EA and stakeholders.



## Table 2: Programme for monthly meetings with the EA

| 2015         | Main topics of discussion  |
|--------------|--|
| January      | No meetings due to planned stakeholder meetings                            |
| February     | Update on resource options and specifically Mogden reuse options           |
| ,            | STT studies – progress update  |
|              | Wastewater reuse – regulatory requirements                                 |
| March        | River Mole and flow constraints  |
|              | Draft output of screening of large resource options                        |
| April        | Review of population forecasts and pilot study                             |
|              | Large resource options   |
|              | Molesley flow constraint   |
|              | Workshop held on flow augmentation and reuse options                       |
| May          | Housing growth forecasts   |
|              | STT and Lower Lee studies  |
|              | Update on the timeline for the Drought Plan                                |
| la de a      | Update on evaluation of demand management                                  |
| July         | Review of options < 50 Ml/d Phase 2 investigations                         |
|              | STT studies  |
|              | 311 studies  |
| August       | Resource options – comments on the small options and Phase 2 investigation |
| / tugust     | Annual Review  |
|              | Drought Plan   |
|              | Population and property projections  |
|              | The same of the Alexander  |
| September    | No meeting   |
|              |  |
| October      | Update on independent audit of GARD model                                  |
|              | Environmental assessment   |
|              | WRMP process verification  |
|              | Update on decision making techniques                                       |
|              | Update on catchment management on Lower Lee                                |
| November     | LTCD optimisation and next steps   |
| November     | Phase 2 investigations – feedback from the stakeholder meeting             |
|              | Update on tariff trials  |
|              | Space of tall that   |
| December     | Draft Guideline for Water Resource Planning                                |
|              | Phase 2 investigations   |
|              |  |
| December (2) | Regional transfers (meeting with EA, NRW and United Utilities)             |
|              |  |
| 2016         | Environmental and assist assessment  |
| January      | Environmental and social assessment  |
| February     | Demand Forecasting   |
|              | AIM  |
|              | Groundwater schemes  |
| March        | AIM – Discussion on trigger levels   |
|              | Drought Plan Update  |
|              | Programme appraisal  |
| April        | Demand Management options  |
|              | Work programme and resources   |
|              | LTCD – Next steps  |
|              | Decision making framework  |
| May          | Reuse options  |
|              | Non-potable reuse  |
|              | Groundwater options  |
|              | LTCD next steps  |
| luno         | Resourcing Work programme and engagement                                   |
| June         | Work programme and engagement  |



|            | Duckland about station  |
|------------|---|
|            | Problem characterisation  |
|            | Customer research – outline of our plans  |
| July       | No meeting due to holidays  |
| August     | Annual Review – EA queries  |
| raguot     | Problem characterisation – EA feedback  |
|            | Population and property methodology statement   |
|            | Topasanon and propostly monouology dialomon   |
|            | Separate meeting were also held on licensing requirements and stochastic based drought                  |
|            | forecasting   |
| September  | SEA scoping report  |
|            | Resource Option investigations  |
|            | Direct River Abstraction Feasibility report   |
|            | Discharge Consent Study   |
|            | Severn – Thames WQ & Ecology report   |
|            | Option screening report   |
|            | Spitori solosiimig roport   |
| October    | Groundwater options and sustainable abstraction   |
|            | Invasive Non-Native Species   |
|            | Update on problem characterisation and approach to programme appraisal                                  |
|            | Household Demand Forecast Method Statement  |
|            |   |
| November   | Long-term demand forecast project (to 2100) with University of Leeds                                    |
|            | Feasibility Options Reports and Fine Screening – Priority Issues for EA                                 |
|            | Environmental assessment and metrics  |
| December   | Supply side method statements   |
|            | Environmental assessment and mitigation   |
| 2017       |   |
| January    | Programme appraisal and modelling   |
|            | Groundwater option feasibility report   |
| F-1        | Screening report – resource options and demand management options                                       |
| February   | Screening report – resource options and demand management options – review of EA                        |
|            | comments and TW feedback  |
|            | Teddington Direct River Abstraction – update on hydrological modelling Review of methodology statements |
|            | Review of methodology statements  |
| March      | Programme appraisal – introduction to decision support tools  |
| Water      | 1 Togramme appraisar introduction to decision support tools   |
| March (24) | NEP – Sustainability Reductions   |
| (= .)      | Overview of work to examine options   |
|            | Environmental assessments of options  |
| April (27) | NEP – Sustainability Reductions   |
| , ,        | Baseline Demand Supply forecast   |
|            | Supply side method statements   |
| May (22)   | Programme Update  |
|            | EA comments on feasibility and screening reports  |
|            | Natural capital Accounting  |
| May (24)   | Teddington DRA – PLA & NE also attended   |
| June (13)  | Introduction to Polyvis – programme appraisal tool  |
| June (21)  | Sustainability reductions, resource options and assessing cost and risk.                                |
| July (20)  | Thames Valley reuse opportunities   |
| August     | No meeting held due to holidays. Ongoing discussions on range of topics.                                |

There are currently no meetings planned from September 2017.



Table 3: Programme for stakeholder forums and technical meetings

| 2014                    |  |
|-------------------------|--|
| 31 January              | Water Resources Forum  |
| ,,                      | Update on the metering programme   |
|                         | Discussion groups 1) Demand management and innovative tariffs 2) Future  |
|                         | uncertainties and 3) Assessing available water resource  |
|                         | Forward engagement programme   |
|                         | Format of WR forums  |
|                         |  |
| 6 June                  | Water Resources Forum  |
|                         | Leakage and the sustainable economic level of leakage  |
|                         | Metering and experience of Southern Water  |
|                         | Review of water resource options – Phase 1 programme   |
|                         |  |
| June                    | Stakeholder technical meeting on Severn Thames Transfer studies  |
| 30 September            | Stakeholder technical meeting No 1 on resource options   |
| 6 October               | Overview of TWs operational performance and then specifically on water   |
| (combined with          | resources:   |
| TW Annual               | Focus on domand management   |
| Stakeholder<br>Moeting) | - Focus on demand management   |
| Meeting)                | - Further work in the next 5 years   |
|                         | - Resilience of the water supply system  |
| 2015                    |  |
| 7 January               | Stakeholder technical meeting no 2 on resource options to review the screening   |
| , candary               | approach and present initial output  |
| 20 January              | Water Resources Forum  |
|                         | Overview of the work programme   |
|                         | Update on work to review large resource options  |
|                         | Water efficiency and partnership working   |
|                         | Sustainable abstraction and the River Kennet   |
| 00 March                | Other believe to the land of the Manager of the Art of  |
| 26 March                | Stakeholder technical meeting No 3 on resource options to review the output of   |
| 6 May                   | the screening and the refined list of options Stakeholder technical meeting on Severn Thames Transfer studies  |
| 6 May                   | Water Resources Forum  |
| 11 May                  | Overview of the work programme   |
|                         | Update on work to review large resource options and presentation on the refined  |
|                         | list of options  |
|                         | Presentation on WRSE & WREA and the integration with WRMPs   |
|                         | The second secon |
| 13 July                 | Stakeholder technical meeting No 4 on resource options covering small resource   |
|                         | options and an introduction to Phase 2 investigations  |
| 15 July                 | Stakeholder technical meeting on the Lower Lee   |
| 7 September             | Water Resources Forum  |
|                         | Introduction to programme appraisal and decision making tools  |
|                         | Developments to the regulatory frameworks - Drought Plan and WRMP  |
|                         | Overview of the work to review small resource options and the Phase 2  |
|                         | investigations   |
| 6 November              | Stakeholder technical meeting No 5 – Update on the Phase 2 investigations and  |
| 4 D                     | focus on the Cotswold Canals transfer and third party options  |
| 4 December              | Stakeholder technical meeting on stochastic drought generation   |
| 2016                    | Water Peccurees Forum  |
| 14 January              | Water Resources Forum  |



|                    | Demand forecasting and population projections  |
|--------------------|--|
| 24 February        | Environmental assessment Stakeholder technical meeting on Severn Thames Transfer water quality and                                       |
| •                  | ecology study  |
| 22 March           | Stakeholder technical meeting on programme appraisal, the process to decide on the preferred programme.                                  |
| 18 April           | Water Resources Forum  |
|                    | Review of decision making frameworks to support programme development Abstraction Incentive Mechanism (AIM)                              |
| 6 May              | Stakeholder technical meeting to discuss progress on the investigations into resource options and demand management options.             |
| 5 July             | Water Resources Forum  |
|                    | Update on options work – feasibility reports and screening<br>Engagement with customers  |
| 6 October          | Stakeholder technical meeting to discuss progress on the investigations into resource options and demand management options.             |
| 27 October         | Water Resources Forum  |
|                    | Drought Plan – Key messages and consultation   |
|                    | Headlines from WaterUK water resources long term planning project Headlines from the options work and next steps                         |
| 8 November         | Stakeholder technical meeting on programme appraisal, the process to decide  |
| 0047               | on the preferred programme, focused on the metrics and scenarios   |
| 2017<br>7 February | Stakeholder technical meeting to discuss screening of resource options and   |
| ·                  | demand management options and next steps including assessment of wider supply system   |
| 16 March           | Water Resources Forum  |
|                    | Review of current demand management programme and effectiveness of activities  |
|                    | Headlines from the WRSE, options work and next steps   |
| 28 April           | <b>Stakeholder technical meeting</b> to discuss resource options and demand management options   |
| May/June/July      | <b>Local Engagement Forums and Roadshows</b> across TW supply area to engage with local communities and stakeholders on our future plans |
| 19 June            | Stakeholder technical meeting to discuss the assessment of environmental   |
| 10 00110           | and social impacts of new resource options, and future options to manage the   |
|                    | demand for water.  |
| 18 July            | Water Resources Forum  |
|                    | Baseline supply demand forecasts including an overview of the assessments of   |
|                    | the medium and long term population forecasts.  Update on programme appraisal and use of scenarios.                                      |
|                    | opadio on programmo appraioar and acc or contanto.   |
| 6 November         | Annual Stakeholder Review  |
| December (date     | Overview of draft WRMP19   |
| TBC)               |  |

#### **Publication of information**

To ensure transparency TW will publish information on its website  $\underline{\text{www.thameswater.co.uk/wrmp}}$ . This will include:



- Work programme and accompanying report
- Meeting minutes and presentations
- Technical reports

#### **Attachment S3-1**

Thames Water: Water Resources Stakeholder Engagement for WRMP19

- 1. TW has held and will continue to hold Forum meetings on an approximately quarterly basis to which all interested stakeholders are invited. The dates for each Forum will be circulated to all interested stakeholder at least 4 weeks beforehand and the agenda and relevant documentation will be made available at least 7 days beforehand. All information in respect of these Forum meetings will be published on TW's website www.thameswater.co.uk/wrmp.
- 2. TW has held and will continue to hold Sub-Forum meetings to discuss specific topics that arise out of the Forum meetings and in respect of which particular stakeholders are interested. The purpose of these Sub-Forum meetings is to enable discussion and scrutiny to take place on technical matters not suited to the Forum meetings. Wherever possible, notice of these meetings will be given at least 4 weeks beforehand. However, due to the complexity and scale of the work programme there will be occasions when this provision cannot be adhered to. However TW will actively seek to keep these occasions to a minimum. The agenda and relevant documentation will be made available at least 7 days beforehand. All information will be published on TW's website.
- 3. Reports referred to in TW's Water Resources Work Programme to inform the WRMP19 will be published in an interim form and circulated to stakeholders. A period of six weeks from the date of publication will be given to stakeholders to comment upon the interim report. A final publication of that report will explain which comments have been incorporated into the report and where comments have not been addressed the reasons for doing so will be explained.
- 4. Thames Water will respond to reasonable requests for information which relate to matters being discussed in Forum or Sub-Forum meetings or to interim reports published either by itself or its consultants provided these requests are made at the earliest opportunity and at the very latest made within four weeks of the date of any such meeting or within the first two weeks or any relevant consultation period.



# Annex S4: Stakeholder organisations invited to join the public consultation

| Action for the River Kennet (ARK)                  |  |
|--|--|
| Advanced Demand Side Management Ltd                |  |
| Affinity for Business                              |  |
| Affinity Water                                     |  |
| Albion Water                                       |  |
| Anglian Water Business (National) Limited          |  |
| Anglian Water Services Ltd                         |  |
| Angling Trust                                      |  |
| Basingstoke and Deane Borough Council              |  |
| Basingstoke Canal Authority                        |  |
| BBOWT  |  |
| Blueprint for Water                                |  |
| Borough of Broxbourne                              |  |
| Bristol Water                                      |  |
| Buckinghamshire County Council                     |  |
| Business Stream                                    |  |
| Cambrian Utilities                                 |  |
| Canal & River Trust                                |  |
| Castle Water                                       |  |
| CCG  |  |
| CEH  |  |
| Cherwell District Council                          |  |
| Chiltern District Council                          |  |
| City of London Corporation                         |  |
| City of Westminster                                |  |
| CIWEM  |  |
| Clear Business Water                               |  |
| Consumer Council for Water                         |  |
| Cotswold Canals Trust                              |  |
| Cotswold District Council                          |  |
| Cotswold Rivers Trust                              |  |
| Cotswolds AONB                                     |  |
| CPRE   |  |
| CPRE Oxfordshire                                   |  |
| Crane Valley Partnership                           |  |
| Dacorum Borough Council                            |  |
| Dartford Borough Council                           |  |
| Department for Environment, Food and Rural Affairs |  |



| DWI   |
|---|
| Dŵr Cymru Welsh Water   |
| East Hertfordshire District Council   |
| Elmbridge Borough Council   |
| Environment Agency  |
| Epping Forest District Council  |
| Epsom and Ewell Borough Council   |
| Essex and Suffolk Water   |
| Essex County Council  |
| Everflow Limited  |
| Fresh Water Habitats Trust  |
| Gloucestershire County Council  |
| Gloucestershire and Herefordshire Branch of Inland Waterways Association  |
| Greater London Authority  |
| Greene King Brewing   |
| Groundwork London   |
| Group Against Reservoir Development (GARD)  |
| Guildford Borough Council   |
| Hertfordshire County Council  |
| Historic England  |
| Horsham BC  |
| ICE   |
| Icosa Water   |
|   |
| Independent Water Networks Ltd (IWNL)   |
| Independent Water Networks Ltd (IWNL) Kennet DC   |
|   |
| Kennet DC   |
| Kennet DC London Borough of Barking and Dagenham  |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet   |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley   |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley   |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden   |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  London Borough of Ealing  |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  London Borough of Ealing  London Borough of Enfield   |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  London Borough of Ealing  London Borough of Enfield  London Borough of Greenwich  |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  London Borough of Ealing  London Borough of Greenwich  London Borough of Hackney  |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Bexley  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  London Borough of Ealing  London Borough of Enfield  London Borough of Greenwich  London Borough of Hackney  London Borough of Hammersmith & Fulham |
| Kennet DC  London Borough of Barking and Dagenham  London Borough of Barnet  London Borough of Brent  London Borough of Bromley  London Borough of Camden  London Borough of Croydon  London Borough of Ealing  London Borough of Enfield  London Borough of Greenwich  London Borough of Hackney  London Borough of Hackney  London Borough of Haringey            |



| London Borough of Hounslow              |
|---|
| London Borough of Islington             |
| London Borough of Lambeth               |
| London Borough of Lewisham              |
| London Borough of Merton                |
| London Borough of Newham                |
| London Borough of Redbridge             |
| London Borough of Richmond upon Thames  |
| London Borough of Southwark             |
| London Borough of Sutton                |
| London Borough of Tower Hamlets         |
| London Borough of Waltham Forest        |
| London Borough of Wandsworth            |
| London Councils                         |
| London Fire Brigade                     |
| London Wildlife Trust                   |
| Mole Valley District Council            |
| National Council on Inland Transport    |
| National Farmers Union                  |
| National Federation of Anglers          |
| Natural England                         |
| Natural Resources Wales                 |
| North Wessex Downs AoNB                 |
| North Wiltshire DC                      |
| NWGB                                    |
| OFWAT                                   |
| Oxford City Council                     |
| Oxfordshire County Council              |
| Pang Valley Flood Forum                 |
| Pennon Water Services                   |
| Port of London Authority                |
| Portsmouth Water                        |
| Reading Borough Council                 |
| Regent Water                            |
| River Thames Society                    |
| Royal Berkshire Fire & Rescue Service   |
| Royal Borough of Kensington and Chelsea |
| Royal Borough of Kingston Upon Thames   |
| Royal Borough of Windsor & Maidenhead   |
| RSPB                                    |
| Runnymede Borough Council               |
| Rushmoor Borough Council                |



| RWE Generation UK                             |
|---|
| Sembcorp Bournemouth Water Ltd.               |
| Sevenoaks District Council                    |
| Severn Trent                                  |
| Severn Trent Connect                          |
| Slough Borough Council                        |
| South Buckinghamshire District Council        |
| South East Water                              |
| South East Water Choice                       |
| South Oxfordshire District Council            |
| Southern Water Services Ltd                   |
| Spelthorne Borough Council                    |
| SSE Water                                     |
| Stroud Navigation                             |
| Stratford upon Avon DC                        |
| Surrey County Council                         |
| Sutton and East Surrey                        |
| Sutton and East Surrey Water Services Limited |
| Swindon Borough Council                       |
| Tandridge District Council                    |
| Tewkesbury DC                                 |
| Thames Anglers Conservancy                    |
| Thames Estuary Partnership                    |
| Thames Rivers Trust                           |
| The Water Retail Company                      |
| Three Sixty                                   |
| United Utilities                              |
| Vale of White Horse District Council          |
| Water Choice                                  |
| Water Plus Limited                            |
| Water Plus Select Limited                     |
| Water2Business                                |
| Waterscan                                     |
| Waverley Borough Council                      |
| Welsh Government                              |
| Wessex Water                                  |
| West Berkshire Council                        |
| West Oxfordshire District Council             |
| Wildfowl and Wetlands Trust                   |
| Wilts and Berks Canal Trust                   |
| Wiltshire County Council                      |
| Wokingham Borough Council                     |



| WWF-UK                   |  |
|--------------------------|--|
| VVVVI -OIX               |  |
| Wycombe District Council |  |