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29 April 2018

Secretary of State, Department for Environment, Food and Rural Affairs
Thames Water Water Resources Management Plan Consultation
Water Resources
Department for Environment, Food and Rural Affairs
Area 3D
Nobel House
17 Smith Square
London SW1P 3JR

Dear Sir or Madam,

Re: Thames Water consultation on draft Water Resources Management Plan 2019

Waterwise is pleased to respond to the Thames Water consultation on its draft Water Resources Management Plan 2019.

Waterwise was founded in 2005 and is the leading authority on water efficiency in the UK and Europe. We are an independent, not-for-profit organisation, receiving funding from Supporters and Affiliates across and beyond the water sector and wider sponsorship and research projects. We like to be at the front, leading and supporting innovative efforts to realise our mission; that water will be used wisely, every day, everywhere. We are supported by water companies as an independent voice - we know they and other stakeholders value our independent challenge and that is why we are responding to this consultation.

Water efficiency is a key contributor to resilience, and water companies are currently carrying out large-scale retrofitting and customer engagement programmes. But water efficiency, scaled up even further, is also an invaluable tool in driving customer participation – as well as using water efficiency programmes to get customers to help deliver water savings, it can contribute to multi-layered relationships to help inform, track and improve customer service and outcomes across companies.

We know Ofwat is keen to see larger-scale water efficiency and we support Defra's expectation that Ofwat "promote ambitious action to reduce leakage and per capita consumption". This also links to the requirement to promote water efficiency in Ofwat's resilience duty.

In June 2017 Waterwise launched our 'Water Efficiency Strategy for the UK'. We produced this in partnership with the wider water sector and it is being delivered by a Water UK-supported Steering Group.

Waterwise has been highly supportive of Ofwat's work on customer engagement and participation, in particular the Tapped-In report. We have launched the 'Leadership Group on Water Efficiency and Customer Participation', which brings together Chief Customer Officers and equivalents of all the UK water companies in a more ambitious approach to wasting less water - using this to drive a more customer-led culture.

We are broadly supportive of the water efficiency ambition set out by Thames Water in their draft WMRP. Our Managing Director, Nicci Russell, provided the quote below for their launch:

'I'm delighted to see the ambition set out in this plan. We only have to look at Cape Town to see the social, environmental and economic impacts in a global city of taking too little action, too late.'

We have been working with Thames Water in developing and delivering our Water Efficiency Strategy for the UK. It is great to see it referenced in their plan:

"Our plan also aligns to the Water Efficiency Strategy for the UK produced by Waterwise, delivering several core actions from this document"

The key elements of our response include that we'd like to see:

- greater ambition on water efficiency in the final WRMP. Although a national target has not been set we'd like to see a stretching target for Thames linked to the PCC common performance commitment of at least 110lpd by 2045, and ambitious water efficiency beyond 2030
- a greater range of innovation both in the short term and from 2030 onwards (where the current plan has a supply focus only)
- We want to see Thames Water's continued engagement in the Water Efficiency Strategy Steering Group and the Leadership Group for Water Efficiency and Participation
- more ambition on metering penetration to 2030
- more innovation in schemes such as stormwater reuse or centralised reuse
- more detail on reducing non-household water use

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Attached are our detailed responses to your consultation questions. We look forward to working closely with Thames Water to deliver water efficiency and would welcome the chance to discuss our response with Thames Water in person.

Yours sincerely,



Aaron Burton MCIWEM C.WEM CEnv CSci
Director of Policy and Innovation

Response to Consultation Questions

Our proposed plan is designed to maintain all of our customers' water supply, with no need for it to be rationed, during a severe drought (the kind that might happen once in every 200 years). We have some options about how quickly we achieve this:

- Ensure that we can maintain all of our customers' water supply during a severe drought, by 2030
- Delay the work so we can maintain all of our customers' water supply by 2035.
- Speed up the work so we can maintain all of our customers' water supply by 2027, the earliest we can deliver suitable options

Please give us any comments on this.

Waterwise supports Thames Water's approach to delivering resilience in terms of reduced likelihood of watering restrictions. Where this strategy is based on demand management measures then we support "speeding up the work so we can maintain all of our customers' water supply by 2027, the earliest we can deliver suitable options". Water efficiency will have many wider benefits for Thames Water, in reduced energy and treatment costs, along with supporting customers by reducing their bills and carbon emissions from hot water use.

We would like to see an ambitious approach to delivering this "speed up" of work with a focus on innovation in water efficiency and meeting per capita consumption (PCC) targets. As PCC forms a common performance commitment under PR19, a more ambitious approach is also likely to be welcomed by Ofwat.

Please give us your comments on our summary of our customers' views.

We note that 70% of Thames Water's customers responded saying they want help to reduce their water use and that customers think that leakage is too high and would like the company to do more to fix leaks. It is good to see the wide range of stakeholder organisations that have been included in developing the draft plan. Waterwise has been involved through discussions with Thames Water's water efficiency team and the wider strategic infrastructure team, including through development of the Waterwise Water Efficiency Strategy for the UK.

The summary of customer's views refers to work undertaken engaging with customers (p.43), however this isn't outlined further. Through the Water Efficiency and Customer Participation Leadership Group we are working with water companies to ensure water

efficiency becomes a part of core business, delivering and accounting for wider benefits, and not just in delivering supply demand deficits. A key element of this is segmentation and we are aware of some of the work around this by Thames for PR19. We'd like to see the final plan outline further how customers have been directly engaged with in terms of participation in water efficiency initiatives - not just in the plan but to help deliver water efficiency as 70% have said they would like to do this.

Please give us your comments on the options we have considered.

Demand management

Over the last WRMP period (2014 to present) Thames Water has been rolling out large-scale water efficiency programmes, including those linked with metering. We support the effort being undertaken in delivering the "UK's largest ever water efficiency programme". Thames Water is also the largest water company in the UK and faces water scarcity pressures that mean it should be the leading company and innovating in this area.

The feasible options included were:

- Smarter Home Visits (SHVs)
- Smarter Business Visits (SBVs)
- Wastage Fix ('Leaky Loos')
- Housing Association Fix
- Intensive Area Based Promotional Campaigns.

Section 8: Appraisal of demand management options provides the range of saving and uptake rates associated with these options. A water efficiency evidence base was originally produced by Waterwise and was last updated in 2014 as part of a collaborative water efficiency fund project. Without this type of evidence base it is difficult to comment on the assumptions behind the options being assessed. We suggest that the final plan outlines further how these will be evaluated and how a collaborative approach with the rest of the industry can help government and regulators support the options chosen and to help raise the ambition on water efficiency across all companies.

With the exception of the incentives programme, many of the options are a larger scale and enhanced roll-out of existing water efficiency measures. In order to meet higher ambition on water efficiency and PCC performance commitments/ government aspirations in the final plan we would like to see more innovative options included in the feasible list or proposals set out to trial them as part of a water company/ industry based innovation initiative, particularly beyond 2030.

In the final PR19 methodology Ofwat set out that "companies should **challenge themselves against the levels and reductions achieved by other water companies, including in**

other countries". For example, Singapore is currently trialling 10,000 smart shower monitors along with a range of other innovations. The Amphiro smart shower monitor is one that is being trialled, which has recently achieved a 12% reduction in total water use for trial participants in Alicante, Spain, who had feedback on consumption from both the shower monitor and smart metering data¹. In the Waterwise response to the National Infrastructure Commission – New Technology Study Second Call for Evidence we highlighted a range of innovations that could be considered in WRMPs².

Although incentives are considered as an innovative approach, we suggest that Thames Water should investigate these linked to products as well as behaviours. Water efficiency rebates linked to effective labelling programmes in Australia and the USA have reduced consumption in many regions. For example, In Western Australia, labelling, combined with a rebate scheme, resulted in 170,000 new water efficient washing machines being installed. The number of Perth households installing dual flush toilets increased from 36% in 1992 to 84% in 2006 and front loading washing machines increased from 7% to 25%.

Water-efficient showerhead and washing machine rebates were demonstrated to be the most cost effective (cost/m³ water saving) for the community and the water company. The programme was originally funded by the state Government, however the latest scheme focussing on shower head replacement and discounts for upgrading to a new dual flush toilet is water company funded.

Appendix Q: Scheme Rejection Register includes supporting the Waterwise Evidence Base. As outlined above we believe that Thames Water and other companies should continue to support sharing information on initiatives and independent review of the costs and benefits of these.

We note from our discussions that the ambition for leakage reduction will be increased to 15% (from 9%) in the final plan. We'd like to see a similar increase in ambition for PCC reduction in the final plan, linked with the common performance indicator in the PR19 methodology and achieving a PCC that is within the frontier of other water companies (see our response to Ofwat's PR19 methodology). We would welcome the opportunity to discuss with Thames Water what greater ambition may look like in terms of innovation, partnership projects and further collaboration to deliver against the actions in the Waterwise Water Efficiency Strategy for the UK.³

¹ http://daiad.eu/wp-content/uploads/2017/11/D7.3_Trials_Evaluation_v1.0.pdf

²

<http://www.waterwise.org.uk/resource/response-to-the-national-infrastructure-commission-new-technology-study-second-call-for-evidence-august-2017/>

³

<http://www.waterwise.org.uk/resource/in-this-section-campaigns-communications-policy-consultation-on-a-water-efficiency-strategy-for-the-uk-waterwise-leadership-group-on-water-efficiency-and-custom-er-participation-research-and-evaluation/>

Water reuse and integrated water management

Water reuse options are included in Appendix O, however in Appendix Q these are outlined as rejected options because of risk. There continues to be risk around these options when not managed by water companies and the costs and benefits remain unclear. However, we'd like to see more innovation by Thames Water in schemes such as stormwater reuse or centralised reuse where they can better manage this risk. There is also a need for closer working with government and the industry to innovate and research in this space. There can be combined benefits of water reuse on the water quality side and our strategy recommends:

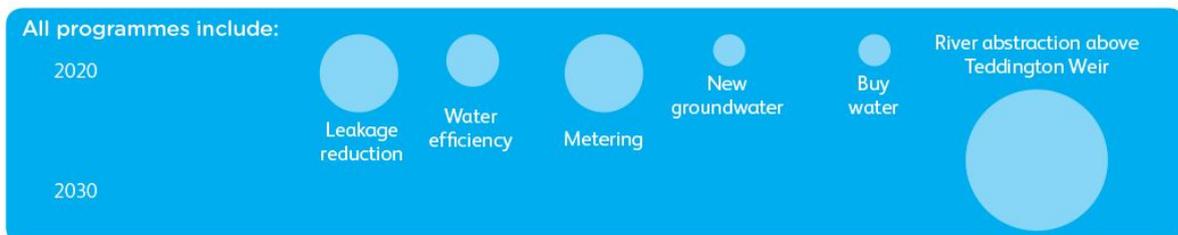
- Including water efficiency in retrofit sustainable drainage (SuDS) and Water Sensitive Urban Design (WSUD) projects
- Identifying opportunities for water efficiency within distributed infrastructure systems to provide nested semi-autonomous areas within cities and improve resilience

Please give us your comments regarding the approach we have taken to develop our proposed water plan. Do you have any comments on:

1. How we have reflected the priorities of our customers
2. The way we have shortlisted options
3. How we have considered environmental and social impacts
4. The alternative programmes of options we have considered

Thames Water has clearly listened to customers in developing water efficiency options to 2020. This was the top preference for customers in London and the Thames Valley. As part of the PR19 business plan process, water companies are required to consult with their non-household customers. We'd like to see this better reflected in the final WRMP and used to inform your approach on water efficiency work with retailers and businesses.

Water efficiency innovation and new approaches are not considered as options beyond 2030. Although we recognise water efficiency will continue in baseline activity, we believe that there will be further innovation that Thames Water should support and consider in the longer term.



Please give us your overall comments on our proposed plan.

Please give us any specific comments on our plans to:

1. Reduce leakage.

Note: In the detailed report of our draft plan we set out our intention to reduce leakage by 9 per cent by 2025. Over the last few months we have listened to customers and stakeholders and as a result are now aiming for a minimum of 15 per cent reduction in leakage by 2025.

2. Continue our household metering programme

3. Promote the efficient use of water

Please give us any other comments about our proposed water plan.

Waterwise supports the positive approach taken in developing demand management options for the draft WMRP. This is outlined clearly in Appendix O. We have been working with Thames Water in developing our Water Efficiency Strategy Strategy for the UK and it is great to see it referenced in their plan:

“Our plan also aligns to the Water Efficiency Strategy for the UK produced by Waterwise, delivering several core actions from this document”

Thames Water has reviewed the Waterwise evidence base and policy documents in developing the draft WRMP. They have also worked with us to undertake research on international approaches to water efficiency and to identify customer spend on water efficiency communication in a range of countries globally.

We look forward to continuing to work with Thames Water to develop innovative approaches to water efficiency and to support the wider sector to meet the Government’s ambition for higher ambition on water efficiency.

- *We would like to see Thames Water continue contributions to the collaborative water efficiency fund and to work with the Water Efficiency Strategy Steering Group to use the fund to support delivery of actions from the Water Efficiency Strategy for the UK*
- *We encourage Thames Water to seek out international approaches to water efficiency innovation directly, via Waterwise and via the International Water Association's Efficient Urban Water Management Specialist Group*

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- *We are keen to see Thames Water continue to engage with the Waterwise Water Efficiency and Customer Participation Leadership Group - including supporting a national communications platform*

Household metering programme

Currently Thames Water's performance on metering of 40% penetration (excl voids) is amongst the lowest in the sector and it will only increase to 45% by 2020. The draft plan target of 60% by 2025 and 84% by 2045 (77% in London) still leaves Thames Water as having one of the lowest meter penetration levels particularly when compared to other water companies in the south east of England.

- *We would like to see Thames Water raising its commitment to metering. Given Thames Water's significant water resource challenges both in terms of population growth and climate change together with major plans for new supply side schemes we do not think the company is ambitious enough on metering penetration in London particularly given the added benefits that could accrue in terms of leakage*

In the Water Efficiency Strategy for the UK we recommended fitting water meters in the majority of homes in England and Wales by 2030, supported by tariffs to protect vulnerable customers.

Promoting the efficient use of water

The draft WRMP states that Thames Water is on track to meet the regulatory commitment, saving 40 MI/d of water by 2020; and that it is going "beyond the economic levels of demand reduction and will reduce the average volume of water used per person (Per Capita Consumption or PCC) to 126 l/h/d in London". We believe that Thames should be looking to go beyond regulatory compliance and pushing to support a lower national PCC target, which would help them achieve resilience with wider support from Government and other stakeholders.

- *We would like to see Thames Water raising its long-term ambition on PCC by setting a stretch target of 110 l/h/d by 2045. We appreciate this relies on increased efforts across other sectors and from government and would be happy to work with the company to advocate for this.*

Short to medium term water efficiency

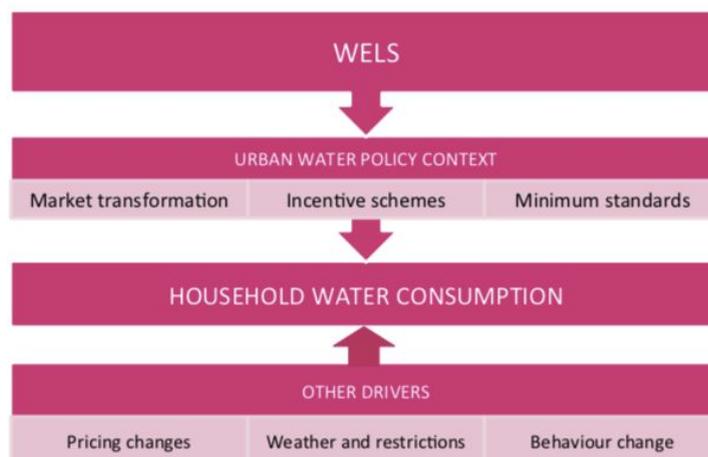
We are pleased to see Thames Water stepping up the Smarter Home Visit scheme and expanding the household reward based incentive scheme to reduce water consumption but would like to see community incentives considered during dry periods alongside individual household ones.

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We are pleased to see Thames Water committing to engaging further with the GLA and others on water efficiency. We would also like to see the company advocating for all new development to be at the leading edge on water efficiency.

- *We would like Thames Water to commit in its final plan to working with developers to ensure new development incorporates water-efficient homes and with other stakeholders to advocate to government for stronger building regulations in water stressed areas.*

We are working with Thames Water, who are co-funding an independent review of water efficiency labelling in the UK. An effective labelling scheme has resulted in a 20% reduction in consumption in Australia between its introduction in 2006 and 2016. We'd like to see Thames Water support water efficiency labelling as an integral part of their water efficiency strategy (see figure below that shows how WELS is a key part of water efficiency in Australia).



- *We would like Thames Water to commit in its final plan to supporting improved water efficiency labelling in the UK and integrating this within its own plans (e.g. promotion of the label in behaviour change programmes, providing incentives/ rebates for water efficient products and appliances)*

Long term water efficiency

No long-term demand management options have been included as part of the preferred plan and limited medium-term demand management options. In the final PR19 methodology Ofwat set out that “companies should challenge themselves against the levels and reductions achieved by other water companies, including in other countries”. In order to

identify these medium- and long-term water efficiency strategies, we suggest that Thames Water should look to other UK and international examples.

There are many medium- and long-term opportunities for innovation, which could be either led by Thames or led by others and adopted by Thames, such as:

- Developer incentives and/or coordinated policy change to reduce consumption in new developments below 110 lpd
- Further innovations in behaviour change and segmentation research over the medium- to long-term
- Alternative service models and better integration with energy sector decarbonisation and energy efficiency agendas
- Improved integration of water reuse or closed-loop systems at household or development scale
- Better integration of SuDS and rainwater harvesting through changing technologies - recognising multiple benefits for water efficiency and flood risk/ water quality
- Improvements in integrated water management at the development scale

A report by the Institute for Sustainable Futures for several water companies in Victoria, Australia, has identified a wide range of water-efficient technologies that require further consideration. These include⁴:

- Showers - a range of innovative water-efficient showers are hitting the market that potentially offering significant water-savings as well as associated energy savings
- Showers - other relatively low cost water-efficient shower products are readily available via retailers and online shopping including: shower shorteners, timers, displays and alarms which target reducing shower length; and aerators that focus on reducing flow rates
- Highly efficient clothes washers that incorporate new sensor technologies
- Nylon bead washers in the commercial setting can use up 80% less water
- Supercritical washing machines that use zero water are being developed
- Steaming wardrobes are on the market and can provide an alternative to washing
- High efficiency toilets are available, along with alternative waters that use almost no Water
- High efficiency taps with sensors have been developed, along with taps that combine soap
- A range of leak detection devices that can shut off water flow remotely are now available
- Highly efficient dishwashers could use less than 10l/ wash.

⁴ Liu, A., Turner, A., and White, S., 2017, Assessment of Future Water Efficiency Measures. Report prepared for City West Water, Yarra Valley Water, South East Water, Melbourne Water, Barwon Water and Department of Environment, Land, Water and Planning by the Institute for Sustainable Futures, University of Technology Sydney.

Water efficiency in non-households

We support the continuation of Smarter Business Visits and note that Thames has tried to engage with retailers in developing their WRMP. We are developing a Water Retailers Leadership Group for Water Efficiency. The aim of this group is to increase the focus on water efficiency for non-households at the national level. We also plan to develop a league table for retailers in terms of water efficiency services but may extend this to assessment of wholesalers for how willing they are to work with retailers on joint programmes. We'd like to see this collaboration in the final WRMP and to have the continued support of Thames Water when working with retailers.

Non-household water use accounts for 18% of total demand. Non-household water demand is expected to increase in the service sector (and to decline in the manufacturing sector). We'd like to see the final WRMP address the question of what more can be done to reduce demand for water in the service sector.

Thames Water still has responsibility for resilience as the wholesaler, which includes non-household customers. We'd like to see in the final WRMP greater emphasis on Thames Water working in partnership with retailers either through incentives, capacity building or continuing to directly deliver smarter business visits.