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28 August 2015

Dear Sir or Madam

Reliable services for customers – consultation on Ofwat's role on resilience

Thank you for your invitation to provide responses to the consultation on Ofwat's role on resilience. We consider that Ofwat's new statutory duty to further the resilience objective is a positive step forward for the sector, as it is vital that customers continue to receive the high quality water and wastewater services over the long-term that they expect, while protecting the environment.

In general, the proposals in Ofwat's consultation seem reasonable, including the focus on delivering resilient services and systems. To achieve this, the sector will need to consider the available approaches to deliver improved resilience moving forwards. This could include greater use of partnerships (across company boundaries and with stakeholders), and finding innovative ways of delivering and financing projects, to the benefit of customers.

To promote trust and confidence, we consider that Ofwat's regulatory framework will need to evolve to meet the challenges facing the sector. This means a renewed focus on encouraging planning over the longer-term, with solutions that provide the best value for customers. The alternative would be an erosion of the resilience of services and systems, leading to higher whole-life costs.

We provide our key points on this consultation below and respond to the consultation questions in Appendix 1. We will also provide further detail on the regulatory framework in our response to Ofwat's Water 2020 consultation.

1. Companies should be encouraged and incentivised to plan over the long-term

To deliver resilience for current and future customers, companies need to plan over the long-term. As the possible range of solutions to improve resilience solutions will include infrastructure solutions with long lead times and asset lives, the planning horizon will need to be more than 25 years – indeed, planning 50 years ahead may be reasonable.

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To enable this longer-term planning approach to be embraced by all stakeholders, we consider there needs to be:

- greater certainty and confidence to plan over long time horizons;
- greater clarity on how Ofwat will encourage long-term planning (e.g. approach to cost-benefit analysis, evidence required to justify resilience investment, balance between customer preferences and bottom-up evidence where different outcomes, etc). We consider it would be useful to develop and agree between Ofwat, companies and stakeholders a transparent framework to use to assess the need for and efficiency of resilience solutions;
- certainty as to the extent of the regulatory promise on past and future RCV growth;
- appropriate consideration of the potential unintended consequences of regulatory approaches; and
- flexibility and, potentially, incentives for companies to innovate, to realise dynamic efficiencies while improving resilience. This should include new and innovative delivery vehicles for resilience investment.

These changes would make important differences to company planning for resilience, though may not be enough on their own. We consider that customers, the environment and companies would benefit from an over-arching long-term infrastructure plan that recognises key challenges and identifies how they should be addressed.

As we have emphasised to government, there is a need for a Water National Policy Statement ("NPS"), as a first step, to provide a planning framework for a major new water resource to serve the southeast region. This should consider the most appropriate solution (e.g. reservoir storage, large scale transfers from another region and/or large scale wastewater reuse). An NPS would help provide legitimacy for such a scheme and give it appropriate weighting in the planning process, to ensure water supplies in London and the southeast region remain resilient.

2. **Resilience should be delivered according to the best value for current and future customers, not the least short-term cost**

We consider that a focus on short-term efficiencies would lead to less resilience over time, through disincentives to invest in enhancing the network, while external factors reduce necessary headroom in the delivery of services. While part of this could be mitigated by finding new and innovative alternatives to traditional investment solutions, this may be insufficient to prevent damaging the future reliability of services. For example, the current rate of replacement of assets across the industry will not be sufficient to prevent the underlying quality of assets continuing to deteriorate with age. A sustainable and resilient system would require the rate of asset replacement across the industry to increase to the point where it is commensurate with the useful life of the assets.

Ofwat states that "*increased resilience does not have to lead to higher bills*"[1] and that there are opportunities for companies to "*do more for less*".[2] We agree that the focus should be on delivering the best value for the lowest whole-life cost (including costs of failures and remedial work), with trust and confidence for customers and investors that the solutions are the right ones and will be delivered efficiently. A focus on lowest whole-life costs will reduce long-term bills. However, it should be recognised that increased resilience may result in higher bills than would be case under less resilient systems and services.

All stakeholders should be open-minded about the range of potential solutions available, for example partnership opportunities and use the best available evidence to identify the right solutions. The definition of value should be considered on a society-wide basis, so accounting for wider benefits for resilience of the environment and economy, and over the long-term.

3. The focus should be on planning for forward-looking risks, not backward-looking events

The water industry has demonstrated its ability to adapt to rapidly changing circumstances, and to go above and beyond expectations to mitigate the impact of unexpected events – such as extreme wet weather events. Despite this ability to react in a positive way to challenging circumstances, we consider there to be opportunities to take more planned, pre-emptive action.

We consider that the experience from past events and risks is a useful indicator, but on its own will not be enough to demonstrate resilience into the future. Real tests on services and systems can arise from shocks or risks realised over a longer period of time, but which are substantially different to past experience. Therefore, we consider that companies should be encouraged and incentivised to plan on the basis of potential future scenarios, taking into account the best available evidence and with an appropriate treatment of uncertainty. In doing so, companies should be better able to take informed decisions that reduce whole-life costs and increase the benefits to society from improved resilience.

4. Measurement of resilience is useful to drive action, which means it needs to be implemented so as to drive the right behaviours

The current focus has been on measuring current service performance and asset resilience. The measurement and testing of system and service resilience over the long-term would be helpful to better understand and mitigate the relevant risks, respond to incidents, and for external communication with our customers and stakeholders.

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[1] Ofwat, "Reliable services for customers – consultation on Ofwat's new role in resilience", July 2015, page 28

[2] Ofwat, "Reliable services for customers – consultation on Ofwat's new role in resilience", July 2015, page 13

It will not be possible, nor in customers' interest, to provide full resilience against all events. The focus for customer engagement should therefore be on the resilience we are currently providing and where this should be improved taking into account possible future risks and events. However, it is complex to measure resilience for a number of reasons, for example:

- there are a large number of different challenges facing the sector, with different degrees of impact on different parts of the service value chain, requiring different approaches to mitigate risks and resolve issues;
- measures that are too narrow can be misleading in providing false comfort around resilience of services or systems, but measures that are too wide can lack focus and clarity; and
- resilience is a long-term issue, so measures need to be forward-looking, not based on past performance.

To drive the right behaviours and encourage innovation, the measurement and incentivisation of resilience therefore needs to be carefully considered and implemented. We would support collaborative working with Ofwat to develop appropriate measures of resilience for AMP6 and the next price review, to be refined and improved over time.

5. Financing is a matter for companies

We support Ofwat's statement that *"the choice of financial structure is a matter for service providers and their investors".*[3] The responsibility on companies to determine their own capital structure and financing arrangements, including taking action where necessary, is a core element of the regulatory framework and has helped support significant customer benefits from the low cost of financing across the sector. It should be for companies to demonstrate the resilience of their financing arrangements and remedy any issues. Intervention by Ofwat would erode companies' accountability to manage their own finances and capital structure.

The protections built into many company financial structures complement provisions in the licence and regulatory ring fence to ensure robust, resilient and efficient financing. For example, companies are required to maintain an investment grade credit rating (helping ensure access to capital markets at efficient cost) and dividend lock-ups occur should key financial metrics fail. In addition, the disclosures of the new longer term viability statement required by the UK Corporate Governance Code will support and evidence overall financial resilience of companies.

We disagree with Ofwat that high levels of debt and complex ownership structures can introduce rigidities that make companies less able to be resilient. Companies have set up efficient financing structures for the long-term, which have helped keep customer bills low. These financing structures are stress tested

[3] Ofwat, "Reliable services for customers – consultation on Ofwat's new role in resilience", July 2015, page 11

against operational shocks under the ratings process. Moreover, financing structures have been shown to be resilient during past shocks to the economy and financial markets since privatisation. We would therefore expect these financing structures to be resilient over the long-term, barring any shocks caused by unexpected or unreasonable changes to the regulatory framework. Furthermore, the design of the regulatory framework, with cost allowances and incentives linked to long-term resilience, can ensure that companies are incentivised to become more resilient over the long-term.

Ofwat suggests that the structure of holding companies can affect a company's ability to respond to change. However, the directors of a company within the regulatory ring fence must have sole regard to that company's obligations and interests, with there being an obligation not to pay a dividend if, for example, paying a dividend would be inconsistent with achieving that aim. We therefore do not see any linkage between a regulated company's ability to respond to change and the structure of its holding companies.

We hope these responses are helpful. If you would like to discuss them further, please do not hesitate to get in touch.

Yours faithfully

Nick Fincham

Nick Fincham
Director of Strategy & Regulation

Appendix 1 – Responses to consultation questions

We respond below to each of Ofwat's questions for consultation.

Q1 Is our basic understanding of resilience aligned with your own – are we addressing the right things in the right way?

We broadly agree with the working definition of resilience in the consultation. We consider that the terms "disruption, trends and variability" could be clarified with a more detailed description of the types of risks that these three terms cover.

We agree with Ofwat's focus on services and systems, rather than kit and outputs. To improve resilience of services and systems, and working within Ofwat's regulatory framework, companies will need to examine innovative approaches to deliver solutions in the future. This includes looking outside company boundaries for opportunities for partnerships, views across catchments, and using new ways of delivering and financing projects, to the benefit of customers.

To meet the challenges facing the sector and improve resilience, we consider that Ofwat's regulatory framework will need to evolve. We provide views about how this could be achieved below and will set out further detail in our separate response to Ofwat's Water 2020 consultation.

These changes would make important differences to company planning for resilience, though may not be enough on their own. We consider that customers, the environment and companies would benefit from an over-arching long-term infrastructure plan that recognises key challenges and identifies how they should be addressed.

As we have emphasised to government, there is a need for a Water National Policy Statement ("NPS"), as a first step, to provide a planning framework for a major new water resource to serve the southeast region. This should consider the most appropriate solution (e.g. reservoir storage, large scale transfers from another region and/or large scale wastewater reuse). An NPS would help provide legitimacy for such a scheme and give it appropriate weighting in the planning process, to ensure water supplies in London and the southeast region remain resilient.

Q2 Do you agree with our view of what Ofwat should deliver, including where we might step in, and what is for others to deliver?

We broadly agree, in principle, with how Ofwat has defined its role and those of companies and other stakeholders. We provide further detail below on how Ofwat's and companies roles could work in practice, to deliver improved resilience over the long-term.

Role for Ofwat

We agree that Ofwat should set the enabling framework for resilience and provide messages for the sector on its expectations for planning to deliver resilient services and systems. This appears to be consistent with Ofwat's new statutory duty.

To deliver resilience for current and future customers, companies need to plan over the long-term. A shorter planning horizon tends to favour shorter-term options, and looking at a shorter period runs the risk of skewing the outcome in favour of solutions with a lower initial capital outlay, which tend to appear more attractive than those with a higher initial cost.

As the possible range of solutions to improve resilience solutions will include infrastructure solutions with long lead times and asset lives, the planning horizon will need to be more than 25 years, as this timeframe may not allow for a genuinely long-term, strategic view. Indeed, planning 50 years ahead may be reasonable.

To enable this longer-term planning approach to be embraced by Ofwat, companies and stakeholders, we consider Ofwat should provide within its regulatory framework:

- greater certainty and confidence to plan over long time horizons. For example, there should be greater transparency around planning for resilience and the uncertainty in planning over such a long time period will need to be allowed for in the design of the regulatory framework;
- appropriate consideration of the drivers required to encourage longer-term planning and the potential unintended consequences of regulatory approaches. For example, the approaches to cost assessment, price control definitions, allocation of risk and incentives (including the service incentive mechanism) have important roles in aligning incentives for companies to plan over the long-term. For example, the evidential bar for justifying additional costs should incentivise companies to submit cost claims that reduce whole-life costs and penalise companies that submit plans that are cost efficient in the short-term but at a higher whole-life cost;
- clarity to investors that efficient investment to improve resilience that is supported by customers will continue to attract an appropriate return, even under upstream competition, for example, by providing certainty as to the extent of the regulatory promise on past and future RCV growth. At present, uncertainty surrounding this issue could risk creating a disincentive to invest in the short-term in support of resilience;
- flexibility and incentives for companies to innovate, to realise dynamic efficiencies while improving resilience. This includes new delivery vehicles for new investment, for example the independent infrastructure provider for the Thames Tideway Tunnel.

A useful step, as part of the Water 2020 programme, could be to commission an independent panel of technical experts to review the regulatory framework to provide assurance that it is set up appropriately to encourage genuine long-term planning.

Longer-term planning could also be encouraged by Defra and the Environment Agency, through setting out expectations on resilience over a much longer period than they do currently, consistent with the approach adopted for fluvial and pluvial flooding, and emphasising the importance of resilience and lowest whole-life cost over short-term efficiency savings. The planning framework needs to encourage long-term planning for wastewater resilience as well as water resilience.

We agree that Ofwat should not take a role in planning across the sector how improved resilience should be achieved. This could have a number of unintended consequences, including creating winners and losers, discouraging companies from taking ownership of plans and engaging with customers, and reducing incentives to identify innovative solutions that reduce whole-life costs and improve resilience. As different customers, customer groups and other stakeholders want different quality and standards of service, companies are best placed to balance resilience with other customer priorities.

Under the current vertically integrated wholesale companies in water, planning for resilience is made easier by having a single source for relevant data, e.g. demand forecasts and possible impacts of future risks. Changes to the framework, for example to disaggregate wholesale activities and introduce markets, could make resilience planning more difficult. For example, experience from the vertical disaggregation of the UK gas sector showed that forward planning becomes more difficult with competitive entry, requiring new mechanisms to be established to collect and collate relevant data on demand from different companies and make it self-consistent. Therefore, we would expect additional mechanisms would be required in the water sector to facilitate resilience planning. There are a number of options to consider for how this could be implemented and the roles of government, Ofwat, companies and entrants, and those who manage markets and catchments in future.

Roles for companies and other stakeholders

We agree that companies should be responsible for delivering resilient services and systems in partnership with other stakeholders and relevant parties.

It is important that companies engage with their customers about resilience on a two-way basis, both educating customers and improving companies' understanding of the relative priority of long-term resilience in the minds of customers. However, customer engagement is a difficult process and should not be over-simplified. We recognise there may be limitations to the extent to which companies can gain meaningful information from future customers about long-term systems and services, and the extent to which customers may be willing to pay for long-term resilience.

Companies therefore need to take ownership of plans using customer engagement, together with information on the wider benefits of resilience to the environment and the economy and whole-life costs, to define the appropriate levels of resilience and acceptable levels of long-term risk. For example, Thames Water should consider the wider benefits from resilience for London's economy.

We note that genuine forward-looking and long-term planning will require appropriate consideration of the impacts of potential events on services. It may be very difficult to gain customer support for solutions to prevent or mitigate the impacts of these events where the impact is not fully known or there is no historic precedent. We therefore consider that customer engagement, even where it includes wider economic and environmental benefits, should be balanced with a robust bottom-up process, based on best available information and risk assessment, as these may lead towards different outcomes.

Companies should plan on the basis of forward-looking risks and test resilience regularly. For example, we currently:

- test and model for resilience, including stress testing of operational activities, billing systems, supply chain, staff availability and other factors;
- model our resilience against certain known factors such as climate change and population growth, as an input to investment decisions; and
- after a major incident – such as a flooding event – we identify lessons learned and build these observations into our future planning.

However, more can be done to encourage planning over the longer-term for future risks that may not have occurred since privatisation, not just focusing on past experience. For example, water resource planning requires companies to prepare plans to survive a repeat of the worst drought in the 90 year historical record, at the lowest economic cost. But we know that there have been severe droughts outside this period (e.g. 'The Long Drought' between 1890 and 1910) and that using the historic record will not reflect the impacts of multi-year droughts likely to occur under climate change).

We consider that companies should be open-minded about the range of potential solutions available, for example partnership opportunities, and use the best available evidence to identify the right solutions, whether this means additional investment, partnerships, etc. For example, the UK Cabinet Office[4] identified that infrastructure resilience could be achieved by: (i) providing protection to resist the hazard or its primary impact; (ii) improving reliability of the infrastructure to operate under a range of conditions and hence mitigate damage or loss from an event; (iii) provide back-up installations or spare capacity to allow switching or diversion to maintain continuity of service under an event; and/or (iv) enabling a fast and effective response to and recovery from disruptive events. The consideration of potential solutions should also include the use of new and innovative delivery vehicles for resilience investment.

[4] Cabinet Office, "Keeping the Country Running: Natural Hazards and Infrastructure", October 2011.

Companies will need to prioritise resilience responses under the range of different approaches and will need to consider whether flexible approaches could be used to provide incremental improvements in place of major projects. Whichever solutions are chosen, the definition of value should be considered on a society-wide basis, accounting for wider benefits for resilience of the environment and economy.

A good example of taking a long-term planning approach is Thames Water's performance commitment ("PC") and outcome delivery incentive ("ODI") for hydraulic sewer flooding in AMP6. This encourages Thames Water to manage flooding by setting rewards and penalties equal to measures of long-term customer value. The dataset on customer benefit data took significant time to develop to an appropriate level of detail and robustness.

We consider that local people should help to set local priorities and support the implementation of new policies or investment, to improve resilience of services at the local level. Local communities are often well-informed about what is needed in any particular area to support resilience and water companies will need to capitalise on this knowledge to target its resilience efforts effectively and build engagement such that local communities deliver their part.

Thames Water's Herne Hill Flood Alleviation Scheme provides a good example of where this partnership approach was successful. This recent scheme has been an innovative approach to flood risk management, protecting over 100 homes and businesses from flooding in Dulwich and Herne Hill. The scheme has been delivered by Thames Water in partnership with Southwark Council and the Environment Agency and is one of the first multi-agency SUDs schemes delivered in London. This required the requirements of each of the partners to be balanced, while consulting with local stakeholders to identify their needs. This relationship provides opportunities for future partnership projects, which can benefit from the lessons learned in delivering this scheme.

Q3 What views do you have on how the water and wastewater sector might measure its performance in delivering resilient services – and the best way for us to demonstrate that we are carrying out our role?

Resilience of services and systems

The current focus has been on measuring current service performance and asset resilience. The measurement and testing of system and service resilience over the long-term would be helpful to better understand and mitigate the relevant risks, respond to incidents, and for external communication with our customers and stakeholders.

The measurement of resilience is not straightforward as, for example:

- there are a large number of different challenges facing the sector, with different degrees of impact on different parts of the service value chain, requiring different approaches to mitigate risks and resolve issues;
- measures that are too narrow can be misleading in providing false comfort around resilience of services or systems, but measures that are too wide can lack focus and clarity. For example, resilience should be about the end services to customers and protection of the environment, not every input to achieve this;
- resilience is a long-term issue, so measures need to be forward-looking, not based on past performance;
- different strategies are needed to ensure resilience for long term trends and short term shocks;
- water and wastewater risks require different types of responses;
- the disaggregation of the value chain and the extension of market competition mean that data from arrange of different companies will need to be collected an collated;
- setting a baseline and trying to adopt a common approach could drive the wrong planning behaviour, as resilience is about delivering for the customers in each company's operating area; and
- measures of performance in wastewater generally look at the frequency of failures, which is a lag indicator. Forward-looking capacity, for example, is generally less well understood and less well measured across the industry.

Based on this, the resilience of services seems to lend itself to a combination of forward-looking indicators of capacity and supply compared to demand and the ability to withstand risks and events in the delivery of services to customers. But, to remain manageable and for ease of communication, there should be limits on the complexity of the approach.

To drive the right behaviours and encourage innovation, the measurement and incentivisation of resilience therefore needs to be carefully considered and implemented. We would support collaborative working with Ofwat to develop appropriate measures of resilience for AMP6 and the next price review, to be refined and improved over time.

We also consider that resilience should be measured through the quality of customer research and evidence of longer-term planning. This would encourage more transparent and open planning on resilience, how companies test the resilience of systems and services, and how customers' views are taken into account. We consider it would be useful to develop and agree between Ofwat, companies and stakeholders a transparent framework to use to assess the need for and efficiency of resilience solutions.

Customer expectations

From our customer research, we consider that customers want to see a resilient water sector industry that protects both them, and future customers, from undue risk.

However, engaging with customers on resilience is not simple. Building on the successes achieved to date through the use of willingness to pay approaches, we advocate the development of more sophisticated ways of gathering customer feedback on resilience to support future planning and the next price review.

It will be important to consider the potential limitations of customer engagement and not place undue reliance on willingness-to-pay information. For example, it may be very difficult to gain customer support for solutions to prevent or mitigate the impacts of these events where the impact is not fully known or there is no historic precedent, even where an evaluation of future risks shows that a particular solution is necessary. We therefore consider that customer engagement, even where it includes wider economic and environmental benefits, should be balanced with a robust bottom-up process, based on best available information and forward-looking risk assessment, as these may lead towards different outcomes that are in the interest of customers.

Financial resilience

Ofwat asks in the consultation whether high levels of debt can in turn make companies less able to respond to change and therefore less resilient.[5]

A key principle underpinning regulation in the sector is that it is the responsibility of companies to determine their own capital structure and financing arrangements. Companies should continue to act within licence terms and maintain an appropriate credit rating – and it follows that it should be for companies to take action where necessary rather than for the regulator to establish a process to step in to make interventions on the company's behalf.

The stress testing of financial structures in the long-term against a range of potential risks is met through a combination of the existing credit rating process and the disclosures of the new longer term viability statement required by the UK Corporate Governance Code (which will be applicable to both year end and interim financial statements going forward). These processes help support and evidence overall financial resilience of companies.

The protections built into many company financial structures effectively complement provisions in the licence and regulatory ring fence to ensure robust, resilient and efficient financing, through for example maintenance of an investment grade credit rating (helping ensure access to capital markets at

[5] Ofwat, "Reliable services for customers – consultation on Ofwat's new role in resilience", July 2015, page 11.

efficient cost) and operation of dividend lock-up should key financial metrics fail to reach covenanted levels (noting that dividend lock up may apply well before default levels are reached). The terms of the licence and regulatory ring fence have proven effective in protecting customers since privatisation and have survived a wide variety of financial stresses. We provided further details in our response to Ofwat's consultation on the financial monitoring framework.[6]

We disagree with Ofwat that high levels of debt and complex ownership structures can introduce rigidities that make companies less able to be resilient. Companies have set up efficient financing structures for the long-term, which have helped keep customer bills low. These financing structures are stress tested against operational shocks under the ratings process. We would therefore expect these financing structures to be resilient over the long-term, barring any shocks caused by unexpected or unreasonable changes to the regulatory framework. Furthermore, the design of the regulatory framework, with cost allowances and incentives linked to long-term resilience, would mean that companies would be incentivised to become more resilient over the long-term to increase returns.

Ofwat suggests that the structure of holding companies can affect a company's ability to respond to change. However, the directors of a company within the regulatory ring-fence must have sole regard to that company's obligations and interests, with there being an obligation not to pay a dividend if, for example, paying a dividend would be inconsistent with achieving that aim. We therefore do not see the link between a regulated company's ability to respond to change and the structure of its holding companies. There may be some differences in shareholder appetite for risk during times of change, but this would be a function of all companies/investors in the water sector (and their expectations on its risk profile) rather than be limited to just shareholders in one particular type of ownership model.

[6] Ofwat, "Consultation on financial monitoring framework", July 2015.