



TA 7.4 Demonstrating our Resilience Technical Annex

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Version 1.0



Summary

The table below summarises how we are meeting Ofwat's requirements of a resilient organisation, including specific, detailed requirements and where more detail can be found across our plan and other publications, such as Water Futures and our Water Resources Management Plan.

Focus Area	The features of our plan which demonstrate this focus	How our plan specifically evidences the features of a resilient organisation	Where you can find further detail throughout our plan	
How well has the company used the best available evidence to objectively assess and prioritise the diverse range of risks and consequences of disruptions to its systems and services, and engaged effectively with customers on its assessment of these risks and consequences?	Southern Water has assessed long-term resilience in the round in accordance with the resilience planning principles.	Considering resilience in the round for the Long Term	<p>We have considered a wide range of pressures and predicted their likely impact on our services, including;</p> <ul style="list-style-type: none"> • A predicted population of five million by 2039 • Planning for more severe droughts than previously experienced • Greater variation in weather patterns, such as drier summers and more extreme rainfall • Sustainability reductions, limiting the amount of water available for public supply during droughts • Increased threats from cyber attacks • Shortfalls in our capabilities, capacity, process, people and culture • Changing public perceptions and policy demands 	<ul style="list-style-type: none"> • Water Futures • WRMP • TA.12.MG02 - Business Case - M&G Data and Information Technology • Chapter 11 - Wholesale Water • Chapter 12 - Wholesale Wastewater
		A naturally resilient sector	We have been working with a range of stakeholders and partners, through our IWCM (Integrated Water Cycle Management) work and developing Catchment First,	<ul style="list-style-type: none"> • TA.11.WR03 - Business Case - Catchment Management Solutions • TA.11.WN02 - Business Case Nitrates

	to create our vision for the future of catchment management and ecosystems thinking. We will be undertaking studies in three catchments to improve our understating of the interdependencies and links between our assets and networks and the natural environment.	
Customer Engagement	The themes which emerged from our insight programme have formed the basis for a number of planned interventions, including stretching Performance Commitments and expenditure plans. Specific Resilience themes from the insight are; <ul style="list-style-type: none"> • A continuous supply of water • Act to prevent flooding, reduce pollution and protect the environment • Support customers in vulnerable circumstances Improve customer service, fix things quickly when they go wrong	<ul style="list-style-type: none"> • TA4.4 - Customer and Stakeholder engagement deliverables • Chapter 4 - Customer and Stakeholder Engagement and Participation (and supporting annexes • CGG Report
Broad consideration of intervention options	We have developed a systematic framework that incorporates a hierarchical	<ul style="list-style-type: none"> • TA7.7 - Optioneering and Estimating • TA11 Business Case annexes

	<p>Totex approach, which drives us to consider a broad range of solutions and Opex / Capex trade-offs along with the Cabinet Office's 4Rs for building resilience. Within our retail business, we analysed a number of delivery models and assessed costs and risks associated with each.</p>	
<p>Delivering best value solutions for customers</p>	<p>We use customer insight data to inform the prioritisation of risk to customer service developing solutions against the totex hierarchy which are evaluated against technical viability and Whole life cost. We calculate benefit in terms of customers' willingness to pay for different service levels, so that we can ensure that the schemes selected are backed by our customers.</p>	<ul style="list-style-type: none"> • TA14.4 Bottom up cost estimation • TA7.7 - Optioneering and Estimating • TA11 and TA12 Business Case annexes
<p>Outcomes and customer-focused approach</p>	<p>We have created a line of sight from customer priorities, through to PCs, including;</p> <p>Reduce water leakage by at least 15%, supporting our long-term goal of meeting the National Infrastructure Commission's requirement of 50% reduction by 2050.</p> <p>Reduce flooding of homes by a further 25% to achieve upper quartile performance,</p>	<ul style="list-style-type: none"> • Chapter 6 - Outcomes, Performance Commitments and Outcome Delivery Incentives • TA6.1 - Our approach to PCs and ODIs • TA6.2 - Our package of PCs and ODIs

		<p>provide additional capacity for over 100,000 new homes in the region</p>	
	<p>Board assurance and sign-off</p>	<p>Our Board has been fully engaged in the development of our Business Plan, providing guidance and challenge to our proposals. Board members are satisfied that customers' views are accurately represented in our Business Plan, through the regular attendance of our CCG Chair at Board meetings. Board approves the publication of the long-term viability financial statements and the financial risk modelling</p>	<ul style="list-style-type: none"> • Chapter 2 - Trust, Confidence and Assurance • TA2.1 - Statements of Board Assurance • TA2.2 Board engagement and challenge • TA2.3 - PR19 Assurance Framework • CCG Report
<p>Southern Water has taken an organisation-wide, integrated approach to identifying and appraising all the diverse risks to the resilience of services and interdependencies across different areas.</p>		<p>Our Enterprise Risk Management process and XeroRisk system unify all risk assessments carried out for key decisions and critical ways of working. Our risk management framework comprises governance, processes and culture and compliance activities which are pivotal for robust and consistent risk management, aligned with best practice and external reviews. We have identified the key threats and risks for our customers and business, these are documented in XeroRisk, through systematic Top Down, Bottom Up assessment of risk. Through our ARRC we ensure that there is a strong culture to review and challenge to consider the interdependencies across different areas of our business, region and services.</p>	<ul style="list-style-type: none"> • TA7.1 - Understanding Operational Risk and Resilience • TA7.2 Corporate risks: Ethical business practices and modern compliance framework • TA7.3 - Understanding risks; High level summary table

	<p>We are pursuing innovative techniques, such as zonal resilience assessments, smart water networks augmented by data to ensure that we have accurate understanding of our risk position and the resilience threats to customer service.</p>	
<p>We are providing clear evidence that we have objectively considered and assessed the full range of resilience management options.</p>	<p>We have examined a broad range of options to ensure continuity of services for all our customers. Our methodology is consistent with the seven principles for resilience planning, the Cabinet Office's four Rs (redundancy, resistance, reliability, response/recovery) and best practice from within the sector and beyond. We have also considered a hierarchy of Totex solution options to present the best value for money solutions, to support our assessment and management of resilience in the round.</p> <p>For our retail business we have examined a range of options to support the delivery of great customer service and decided to move to an outsourced model. For IT/ OT, Data and Information, which we consider to be a key enabler of a resilient organisation in the future we considered using specialist in Accenture the options available and propose 18 key work packages to deliver more resilience services for customers. In this area building on the 4Rs of resilience we have also taken the step to recognise the importance of preparation and detection in regard to IT security, in order to prevent and minimise the threat in the first instance.</p>	<ul style="list-style-type: none"> • Chapter 11 - Wholesale Water • Chapter 12 - Wholesale Wastewater • Chapter 13 - Retail Controls • TA.12.MG02 - Business Case - M&G Data and Information Technology
<p>Our proposals reflect customer preferences and are supported by the commitments made to customers.</p>	<p>We have completed in-depth customer and stakeholder engagement, which has given us clear insight as to their resilient priorities. This has shaped our decisions on the solutions, systems and processes we believe are necessary to build a resilient water future for the South East. Customer and stakeholder insight has informed our goal,</p>	<ul style="list-style-type: none"> • TA6.1 - Our approach to PCs and ODIs • TA7.7 - Optioneering and Estimating • TA4.4 Customer and Stakeholder engagement deliverables

		<p>commitments and how we plan to achieve those commitments. Initial insight was built on by conducting a number of deep dives on important customer topics, including a series of panels and workshops. The themes which emerged from our insight programme have shaped our planned interventions, expenditure and efficiency plans, and the stretching Performance Commitments that they will deliver.</p>	<ul style="list-style-type: none"> • TA4.3 - Triangulation of customer priorities • Chapter 4 - Customer and stakeholder engagement and participation • CCG Report
<p>How well has the company objectively assessed the full range of mitigation options and selected the solutions that represent the best value for money over the long term, and have support from customers?</p>	<p>We have developed a plan that delivers long term resilience in the round, which provides the best long-term value for money for customers.</p>	<p>Our customers priorities are at the centre of our plan. We have identified and assessed risks from across our business. Through our planning process we have utilised a hierarchical Totex approach in the Wholesale business, which drives us to consider a broad range of solutions and Opex / Capex trade-offs along with the Cabinet Office's 4Rs for building resilience.</p> <p>To ensure that the solutions we have developed across our wholesale deliver best value for customers, we undertake a rigorous whole life costing process. We use customer insight data to inform the prioritisation of risk to customer service, developing solutions against the totex hierarchy which are evaluated against technical viability and Whole life cost. We calculate benefit in terms of customers' willingness to pay for different service levels, so that we can ensure that the schemes selected are acceptable and backed by our customers. The whole life cost model determines the whole life cost of scheme options over 60 years and considers customers data and consequential cost mitigation to determine preferential options to justify scheme selection, ensuring that we are providing the best value in the long term for customers.</p>	<ul style="list-style-type: none"> • TA14.4 - Bottom-up Cost Estimation • TA11 and TA12 Business Case annexes
	<p>Southern Water have provided robust evidence that</p>	<p>In preparing for PR19 we have undertaken both a top down and bottom up approach to establishing efficient</p>	<ul style="list-style-type: none"> • Chapter 14 -: Wholesale Cost Efficiency

customers are not paying twice for resilience given the funding provided in previous price controls.

revenue controls across our business. The top down approach has enabled us to independently identify, using cross sector data on cost and performance, a view on the cost frontier. This frontier describes a spend level which ensures that customers are not paying twice. We have used this information to inform the revenue allowances in our plan. The bottom up analysis that we have undertaken has identified the risks, requirements and mitigation options required to deliver resilient services. In bringing these together we have established a plan where we understand the risks and are confident that customers are not paying twice.

In some areas we recognise that we are going to need to outperform. In Wastewater Treatment we need to continue to improve our performance, focusing first on being brilliant at the basics and then transforming our organisation, these programme along with Environment+ are designed to ensure that we catch up, delivering upper quartile performance without seeking additional revenue to do so.

We demonstrate other parts of our business, for example leakage, our performance is frontier and we are proposing to push even further through this plan with the use of technology central to this, to ensure that we leverage our historic investment effectively to create the smart network of the future to offer even more resilient services.

We present strong evidence that we have used robust, ambitious and innovative approaches to assess and mitigate risks to long-term resilience in the round. Our proposals are supported by

We are working with a broad range of partners to ensure we are all building a resilient water future for the South East and that our stretching performance commitments will deliver the resilience our customers and stakeholders expect.

In our retail business we have considered a broad range of options and determined that moving to an

- TA11 Business Case annexes
- Chapter 17 - Accounting for Past Delivery

- Chapter 8 - Helping customers who need our support – our response to the challenges of Affordability and Vulnerability
- TA8.1 - Tackling affordability and vulnerability
- TA9.1 - Great Customer Service

stretching commitments to customers.

outsourced model will ensure that our services to customers are efficient and of a high quality, but that through working in partnership we have increased certainty that these services will be resilient, as our partner is well placed to deal with changes in demand. In addition to C-MeX, we have set stretching PC targets in other areas that are important to customers now and in the future.

Across our wholesale water Network+ price control we have used our water risk framework, which includes an innovative zonal resilience assessment to identify and prioritise households at risk and consider the effectiveness of mitigation options. Our plan will ensure that we improve day-to-day resilience by reducing the number of supply interruptions, with joint emergency and response plans minimising disruptions for those who do experience them, reduce water leakage by at least 15%, through our mains replacement programme and Network 2030 Smart Networks programme supporting our long-term goal of 40% reduction by 2040.

The wholesale wastewater Network+ price control in terms of customer priorities is focused on reduce flooding of homes by a further 25% to achieve upper quartile performance, provide additional capacity for over 100,000 new homes in the region and deliver significant environmental programme in partnership with the EA to better protect and improve local rivers, streams, groundwater supplies, shellfisheries, and bathing waters. To achieve these outcomes, we are taking a risk based approach to Drainage Area Strategy and rolling out our Zero Flood Zones approach we've trialled in AMP6. Increasing our proactive collaboration with Local Authorities and developers to support growth in parallel with a programme of capacity enhancement across our

- TA.11.WN01 - Supply Demand Balance
- TA.11.WN04 - Water Networks
- TA.12.WW07 - Flooding and Pollution Strategies
- TA7.6 - Measuring improvements through our performance commitments
- TA.12.WW05 - Wastewater Growth
- TA14.1 - Cost Adjustment Claim 1 - Bathing Water

network and treatment assets. Our approach to Bathing Waters sees us go beyond the statutory minimum, where cost beneficial, utilising a broad suite of interventions including addressing sewer misconnections and influencing customer behaviour, to avoid costly end of pipe solutions.