# BUSINESS PLAN 2025 TO 2030
# PRT06 MANAGING OUR RESILIENCE IN THE LONG TERM

# CONTENTS

# 1. AT A GLANCE

We have a resilient business which has stood up to numerous challenges over the past 160 years and has continued to deliver first class services for our customers. Resilience has traditionally been at the heart of the business which can be demonstrated in our history of industry leading connectivity, and we have proved in recent years that the same principle applies as we have successfully dealt with all the challenges from extreme weather events, including the summers of drought and freeze thaw events without any significant impact to our customers.

There are many factors that we monitor and plan for in addition to the weather and climate changes, such as population growth, cyber threats, complex supply chains, health impacts and financial instabilities, and we have understood the internal and external environments in which we operate. In addition, we continually listen to the priorities of our customers and continue to put the service we offer to them at the heart of everything we do. We are delighted that our industry customer service assessments of SIM and more latterly C-Mex, continually highlight the high satisfaction levels that our customers have in our company, something that would not be evident if we had not able to prove ourselves to be resilient.

We understand our business is starting a truly transformational programme that will see the business grow significantly in value and size. The building of the first reservoir in the country in over 30 years, the installation of a new Customer Relationship Management (CRM) and Billing system, and the moving from the lowest water meter penetration in the industry to the delivery of the sectors first fully smart metered customer base, all over the next 10 years, will test the resilience of the business like never before. We understand that this step change increases the water resource resilience across the Southeast, but with that comes increased responsibility to ensure we continue to remain resilient. The Covid experience delayed our systems-based resilience roadmap plans at the start of the current AMP, but we have taken some significant steps forward to ensure our future resilience, not least by the installation of a Copperleaf investment decision support tool. This tool, which has required significant investment of both cost and time, utilises a Value Framework that helps us evaluate and optimise priorities across multiple parts of the business, including asset management, Environment, Social and Governance (ESG) and sustainability, finance, Information Technology and Operations. We see this ensuring our investments are achieving the best value results across the whole business and not treating each department in isolation.

Recognising that we cannot rely upon our leading performance over recent AMP periods, we have engaged with Arcadis, an industry leading asset management consultancy, to advise us on how we maintain our service provision with systems-based asset and risk management embedded at its heart. Together we have developed a roadmap, the implementation of which, will enable a step change and more robust approach to managing our resilience through AMP8 and into the future.

This report sets out our approach and how we will successfully embed systems-based asset and risk management into our day-to-day operations to ensure that resilience is robustly managed for our long-term service delivery.

We explain how we have engaged with customers and stakeholders to understand and ensure their resilience priorities are built into our approach
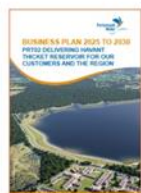
# 2. DOCUMENT MAP

## Business Plan to 2030
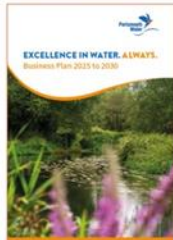
**PRT01**
**EXCELLENCE IN WATER. ALWAYS.**
Business Plan 2025 to 2030

For the full navigation plan and documents visit **portsmouthwater.co.uk /business-plan-2025-2030**

## Supporting Documents

**PRT02**
Delivering Havant Thicket Reservoir for Our Customers and the Region

**PRT03**
Engaging and Understanding Our Customers and Communities

**PRT04**
Delivering for Our Customers and Communities

**PRT05**
Delivering Outcomes for Our Customers

**PRT06**
Managing Our Resilience in the Long Term

**PRT07**
Our Investment Plan

**PRT08**
Delivering Our Investment Plan

**PRT09**
Securing Value for Money

**PRT10**
Innovation to Enhance Our Service Delivery

**PRT11**
Addressing Affordability and Vulnerability

**PRT12**
Accounting for Past Performance

**PRT13**
Aligning Risk and Return

**PRT14**
Our People

**PRT15**
Board Assurance

## Vision and Our Long-Term Plans

**PRT16**
Our 25-Year Vision (consultation version)

**PRT17**
Water Resource Management Plan (revised)

**PRT18**
Long-Term Delivery Strategy 2025-2050

# 3. MANAGING OUR RESILIENCE IN THE LONG TERM

**Set out below are details of our ambition for providing a resilient service to our customers. These are based on past, current, and future views of the ways in which we manage resilience. We aim to continually improve upon our current position, seeking to build upon a foundation of strong historical resilience in our networks and our organisation.**

## A. Understanding Resilience

Resilience is defined by Ofwat as "the ability to cope with, and recover from, disruption and anticipate trends and variability in order to maintain services for people and protect the natural environment now and in the future."

This may be interpreted as the ability to either instigate measures to avoid disruption or, if that is not feasible, have plans and procedures in place to deal with a disruption and restore the relevant performance or situation. Figure 1 illustrates the basic principles.

### Figure 1: Resilience Assessment



Understanding the risks that relate to such potential disruptions is a major element in the determination of where further resilience is needed and how effective current operations and planning is.

Ofwat defines Resilience as 'the ability to cope with, and recover from, disruption and anticipate trends and variability in order to maintain services for people and protect the natural environment now and in the future'.

**Resilience in the round is an integrated combination of –**

- operational resilience – the ability of an organisation's infrastructure, and the skills to run that infrastructure, to avoid, cope with and recover from disruption in its performance.

- financial resilience – the extent to which an organisation's financial arrangements enable it to avoid, cope with and recover from disruption; and

- corporate resilience – the ability of an organisation's governance, accountability and assurance processes to help avoid, cope with and recover from disruption and to anticipate trends and variability in all aspects of risk to delivery of services.

In all three cases it is necessary to identify what events could force the values of parameters that represent the company's objectives to move outside tolerable limits. Once such an event has been identified, an assessment of whether existing safeguards are adequate needs to be undertaken. If necessary additional measures or plans need to be initiated to provide further mitigation. In all cases, a tolerable level of risk needs to be established, beyond which, action needs to be taken or planned.

Resilience in the round applies to organisational, financial, and operational aspects utilising a common set of principles.

# B. Historical and Current Position

Portsmouth Water has historically had highly resilient networks and been organisationally sound. The interconnectivity of the network built up over many years leaves the business in an extremely strong position with regards to supply interruptions. We can easily move water around our entire area of supply and can swiftly recover from major burst mains or outages at treatment works by diverting water from other areas within the network.

## Resilience Activities in AMP7

In August 2019 we introduced a document highlighting how we intend to continue to develop resilience through AMP7.

We identified twelve systems within our business, many of which were interdependent, on the diagram below (Figure 2). We have started to develop and implement a systems-based approach to resilience in the round which will serve us well into the future, enabling a clear line of sight between risks to resilience, planned mitigations, the package of outcomes and corporate governance. Central to this will be our decision support tool, Copperleaf, which we will use to bridge the gap between risk identification, mitigation and investment optimisation. A description of Copperleaf is provided later in this document.

## Figure 2 - Resilience Development Assessment Tool
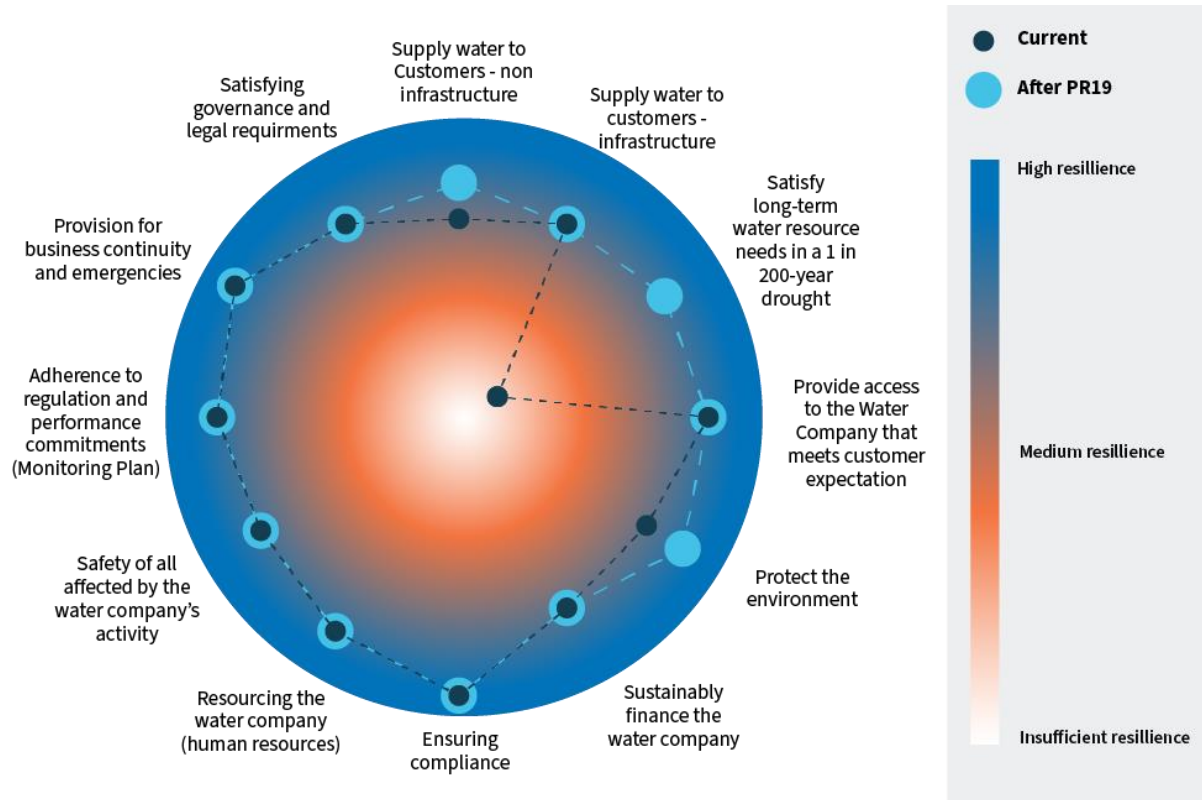


(Responding to comments from Ofwat on the PR19 Business Plan submission we upgraded our resilience tables to provide a line of sight between risk areas identified in the operational resilience study and the Outcome Delivery Incentives (ODIs) which are used to monitor and measure our effective management of these risks.

This table (Figure 3) has highlighted potential; impacts on our objectives and enabled us to enhance resilience where required.

## Figure 3: Operational Resilience/ODI Assessment Table

| Group | Risk | CRI | Supply interruptions | Mains repairs (per 1000km) | Unplanned outages (%) | Per Capita Consumption | Risk of restrictions in a drought | Leakage (Ml/d) | CMex | AIM | Catchment management | Water quality (bl, br, orange) | Resilience schemes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Interruption to Supply | Control Valve failure (fails shut) | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | |
| | Crossing failure(s) with average repair duration of 2 months | | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | |
| | Crossing failure(s) with average repair duration of 2.5 weeks | | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | |
| | Crossing failure(s) with average repair duration of 4.5 months | | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | |
| | Crossing failure(s) with average repair duration of 9 months | | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | |
| | Failure of Major (12in or more) Trunk Main - easy repair | | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | |
| | Failure of Major (12in or more) Trunk Main - long repair | | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | |
| Flooding | Flooding sufficient to result in loss of all the sites at risk of flooding | | | | | | | | | | | | |
| Water Quality | Increased Pesticides/Other Chemicals in Raw Water | ✓ | | | | | | | | | | | |
| | Loss of Aldingbourne WTW during high nitrate period | ✓ | | | ✓ | | | | | | ✓ | | |
| | Oil leak/spill in aquifer zone affecting any individual source | ✓ | | | ✓ | | | | | | ✓ | | ✓ |
| | Oil leak/spill in aquifer zone affecting Brick Kiln and Lavant | ✓ | | | ✓ | | | | | | ✓ | | ✓ |
| | Oil leak/spill in aquifer zone affecting West Street and Soberton | ✓ | | | ✓ | | | | | | ✓ | | ✓ |
| | Oil leak/spill in aquifer zone affecting Westergate and Allingbourne | ✓ | | | ✓ | | | | | | ✓ | | ✓ |
| | Aquifer pollution leading to SR and mains contamination (due to oil) | ✓ | | | ✓ | | | | | | | | ✓ |
| | Contamination of a source due to fracking | ✓ | | | ✓ | | | | | | | | ✓ |
| Security | Risk of breach of security on at site, leading to shutdown | | | | | | | | | | | | |
| | Breach of Service Reservoir Security by Fire Brigade | ✓ | ✓ | | | | | | | | | | |
| Weather | Snow causing access issues leading to loss of remote SRs | ✓ | ✓ | | | | | | | | | | |
| | Hurricane - high winds causing electricity supply fail | ✓ | ✓ | | ✓ | | | | | | | | |
| Asset Failure | Booster Station outages (with short durations – generally hours or days) | | ✓ | | ✓ | ✓ | | | | | | | |
| | Borehole outage (short duration – corresponding to Outage Register | | ✓ | | ✓ | ✓ | | | | | | | |
| | Loss of Walderton WTW and issue in Bognor supply system | ✓ | ✓ | | ✓ | | | | | | | | |
| | Treatment works outage (short duration – corresponding to Outage | | | | ✓ | | | | | | | | |
| | Loss of Hoads Hill SR mixing chamber during high nitrate period at | ✓ | ✓ | | | | | | | | ✓ | | |
| | Loss of Nelson SR during high nitrate at Lovedean WTW | ✓ | ✓ | | | | | | | | ✓ | | |
| | Service Reservoir outage (short duration – corresponding to Outage | | | | | | | | | | | | |
| | Complete destruction of reservoir | ✓ | ✓ | | | | | | | | | ✓ | |
| | Contamination of service reservoir - other reasons | ✓ | ✓ | | | | | | | | | | |
| | Combined failures involving independent simultaneous failures of: | | | | | | | | | | | | |
| | Multiple boreholes | ✓ | ✓ | | | | | | ✓ | | | | ✓ |
| | A borehole and an intake | ✓ | | | | | | | ✓ | | | | ✓ |
| | A borehole and a main | ✓ | | | | | | | ✓ | | | | ✓ |
| | A borehole and a pumping station | | | | ✓ | | | | ✓ | | | | ✓ |
| | A borehole and a service reservoir | | | | | | | | ✓ | | | | ✓ |
| | A borehole and a treatment works | | | | ✓ | | | | ✓ | | | | ✓ |
| | Two control valves | | | | | ✓ | | | | | | ✓ | ✓ |
| | A control valve and a treatment works | | | | ✓ | ✓ | | | | | | | ✓ |
| | Two mains | | ✓ | ✓ | | | | | | | | ✓ | ✓ |
| | A main and a pumping station | | | | ✓ | | | | | | | | ✓ |
| | A treatment works and an intake | | | | ✓ | | | | | | ✓ | | ✓ |
| | A treatment works and a main | | | | ✓ | | | | | | | ✓ | ✓ |
| | A treatment works and a pumping station | | | | ✓ | | | | | | | | ✓ |
| | A treatment works and a service reservoir | | | | ✓ | | | | | | | | ✓ |
| | Multiple treatment works | | | | ✓ | | | | | | | | ✓ |

We also decided to review our peer's approach to understanding and identifying shocks and stresses. Figure 4 below contains the groupings of natural hazards and man-made threats that we have adopted to our framework and that we consider good practice.

**Figure 4 - Taxonomy of threats**

| Environmental | Social | Technological | Economic |
|---|---|---|---|
| - Climate change<br>- Environemtnal change<br>- Environmental pollution<br>- Erosion and ground movement<br>- Extreme cold<br>- Extreme rainfall<br>- Heatwave and drought<br>- Infectious disease<br>- Land use change<br>- Natural disasters<br>- Space weather<br>- Storm and high wind | - Change in customer behaviour and expectations<br>- Harrassment and discrimination<br>- Infectious disease - human<br>- Population growth<br>- Skills shortage<br>- Vandalism<br>- Violence and terrorism<br>- Vulnerable communities and customers<br>- Urban creep | - Ageing infrastructure<br>- Asset failure<br>- Cyber attack<br>- Disruptive technologies<br>- Manjor industrial and/or transport incidents<br>- Power failure | - Bad debt<br>- Costs increase<br>- Financial crisis<br>- Industrial and trade disputes<br>- Recession<br>- Supply chain failure |

**Political-legal**

- Political & macro industry change

Sources: University of Cambridge Centre for Risk Studies taxonomy of threats

# C. Corporate Resilience

Corporate resilience can be defined as the ability of an organisation's governance, accountability and assurance processes to help avoid, cope with and recover from disruption and to anticipate trends and variability in all aspects of risk to delivery of services.

The Company views corporate resilience as a blend of high-level management, ensuring that processes are in place at all levels within the business to identify and to assess resilience risks operationally and financially, and an assurance aspect where internal and external assurance is carried out from time to time. Resilience risks are incorporated within the corporate risk register (with appropriate actions and mitigation), and also encompasses all the organisations personnel that aren't directly operating our infrastructure.

Corporate resilience is also the understanding of risks to corporate reputation and the consequent effect on credit scores and borrowing power, gearing ratios, and the effects on cost of borrowing, supply chain reliability and the risk to project delivery and climate change effects.

## Risk Management in Portsmouth Water

The Board has established procedures to manage risk and oversee Portsmouth Water's system of internal control and risk management and considers risk management to be fundamental to the achievement of the businesses strategic objectives. These systems and procedures are designed to allow employees across all levels within the business to identify, manage and practicably, reduce and mitigate the effects of the risk of failure to achieved business objectives. During the past two years the Board highlighted the importance of risk management by explicitly adding risk to the Audit and Risk Committee title and terms of reference. Dedicated time is allocated to Risk Management at each meeting of the Committee which it to take an overview of ongoing key risks, a snapshot views of emerging risks, and a deep dive into the key risk that are exercising the Board. The Board ensures all significant risks have suitable mitigation in place.

Key procedures have been established to provide effective internal control include organisational, budgetary control, investment appraisal and risk management activities.

The Company applies the following Risk Framework (Figure 5):

### Figure 5 - Risk Framework Diagram
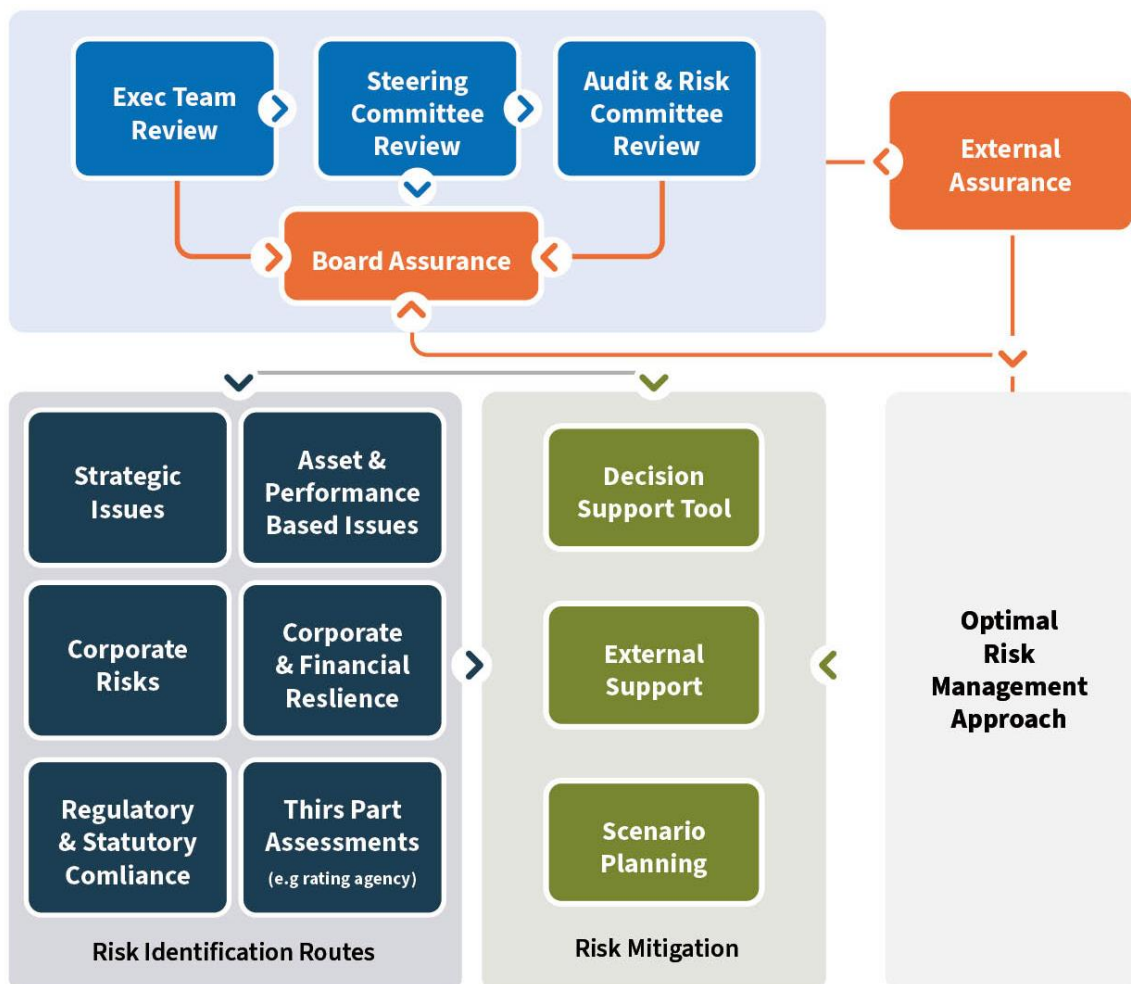
The above Framework demonstrates the process the business undertakes to use risk to identify the optimal business strategy. We understand the key strategic issues within our business and also the regulatory and statutory guidelines that we are required to operate within. We then feed into our analysis asset performance data and corporate and financial resilience, all the time using third party assessments of that resilience.

Once the data is collected, the Copperleaf decision support tool is utilised, along with scenarios planning exercises and external input, to deliver an optimal approach for the business. The process is run by the internal Executive Team, but the Audit and Risk Committee have oversight of the work and for PR24, the Board Steering Committee have reviewed the process and outcomes as part of their Board Assurance process.

Overall, we have a system where risks may be identified from various sources. These are analysed and prioritised such that the optimum mitigation can be applied. The following diagram (Figure 6) illustrates this process.

## Figure 6 - Typical Flows of Risk Reporting and Management
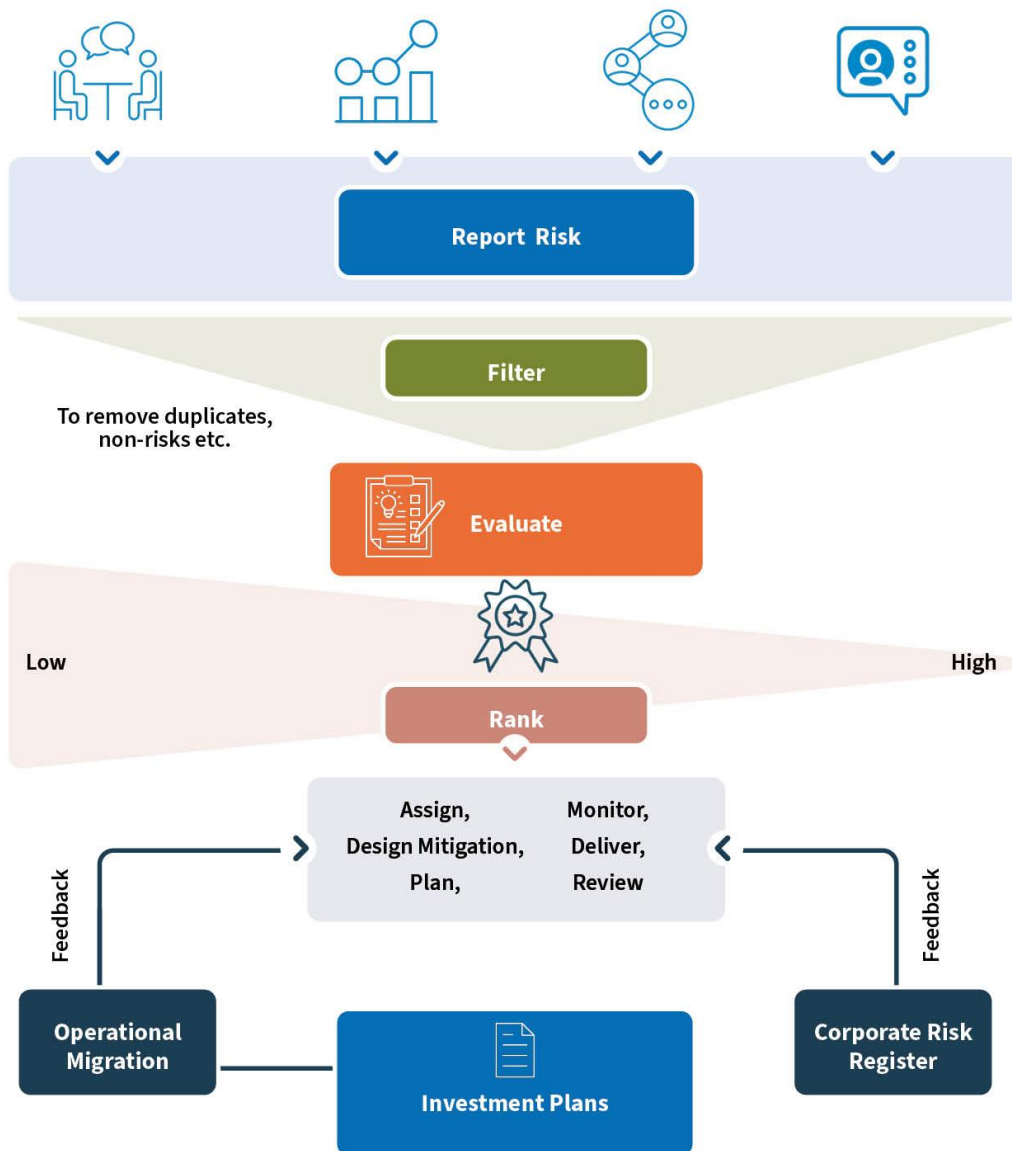
The diagram above shows, on its left, that we identify and record potential risks from a variety of sources. These include individual colleagues, committees, working groups and systems. Identification may be made as a result of operational studies such as critical asset documentation, site visits and new requirements and obligations. Additionally, risks may be apparent in horizon scanning exercises and other long-term asset management work. All such risks are examined and processed through a filtration system which can pick out duplications and minor risks and forward the remaining to undertake the appropriate action, as shown to the right of the diagram.

## Copperleaf System

A key part of our ongoing resilience activity over the past 18 months has been the introduction of the Copperleaf Tool business support tool. This tool, which has required significant investment of both cost and time, helps us align goals across multiple parts of the business, including asset management, ESG and sustainability, finance, Information Technology and Operations. We see this ensuring our investments are achieving the best value results across the whole business and not treating each department in isolation.

Copperleaf is one of the leading investment planning systems worldwide. It is employed by many utility and other companies to help develop cost effective and efficient proposals for future expenditure.

The system is risk based. It utilises balances between the costs of schemes or initiatives and their benefits or value to the organisation, society, and the environment. Plans are optimised against constraints related to objectives and costs. The following diagram illustrates the way in which Copperleaf assesses costs and benefits of schemes and different options for meeting objectives. The optimiser chooses the least risk options to fulfil the constraints imposed. Outcomes' benefits can be classified into the six 'capitals' of values as shown in the diagram below (Figure 7).

### Figure 7 - Copperleaf Valuation of Risks and Outcomes
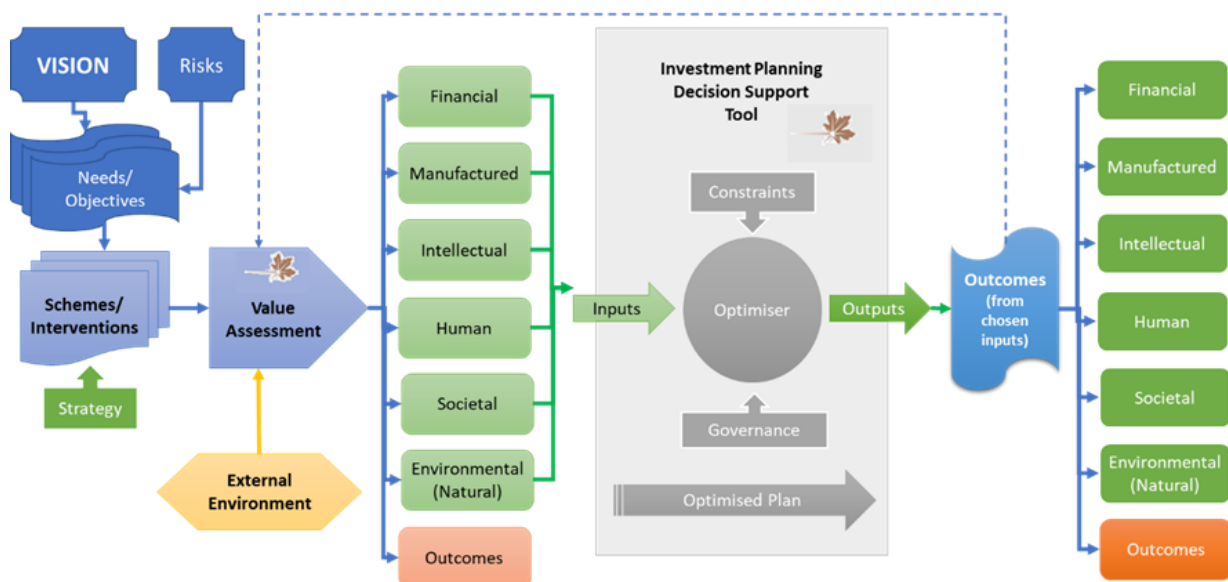


In some cases, schemes or interventions may have more than one benefit or value associated with them. The diagram (Figure 8) below shows a typical scenario that can occur.

## Figure 8 - Copperleaf - Identification of Multiple Values/Benefits
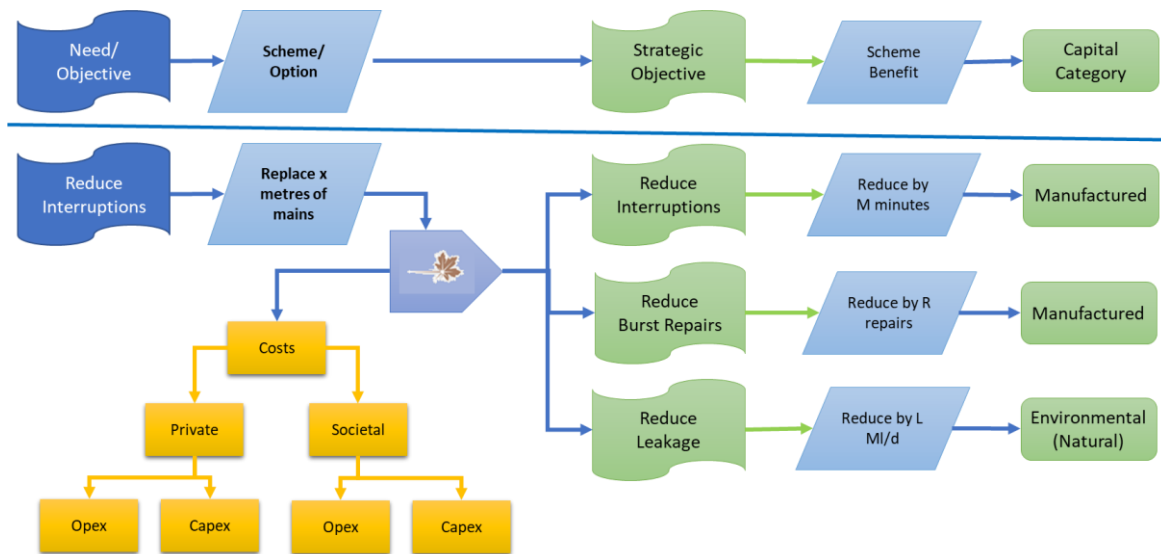


The system can provide predictions of risks mitigated and remaining risks for designated investment scenarios, thus assisting us in assessing overall resilience aspects for various plans.

The development of our Copperleaf system is currently at an early stage. We are only at the point of trialling investment procedures now and, therefore, will not be using the whole system for PR24 planning purposes. However, the investment planning processes utilised for the next price review will fully revolve around the requirements and principles included in Copperleaf's methodologies.

## Operational Resilience

Historically, our asset systems have been inherently resilient. All our distribution systems are fed from service reservoirs with at least 48-hour storage.

Our production, storage and distribution system has been highly resilient with 99.7% of customers fed directly from service reservoirs, which on average hold two days water storage – twice the industry standard. In addition, Portsmouth Water's strategic spine main, as shown in the following diagram (Figure 9), has provided a highly interconnected system between our sources allowing the transfer of water around the network and into any areas with an operational issue or shortage. This has significantly reduced the likelihood of our customers experiencing an interruption to their supplies.

Smart metering and our Lead enhancements will assist operational resilience in the future, but we have followed our customer requests from their engagement to focus on maintaining a stable service as opposed to significant further improvements in this area. Our plans show small improvements to mains repairs and interruptions.

## Figure 9 - Portsmouth Water's Current Network Configuration
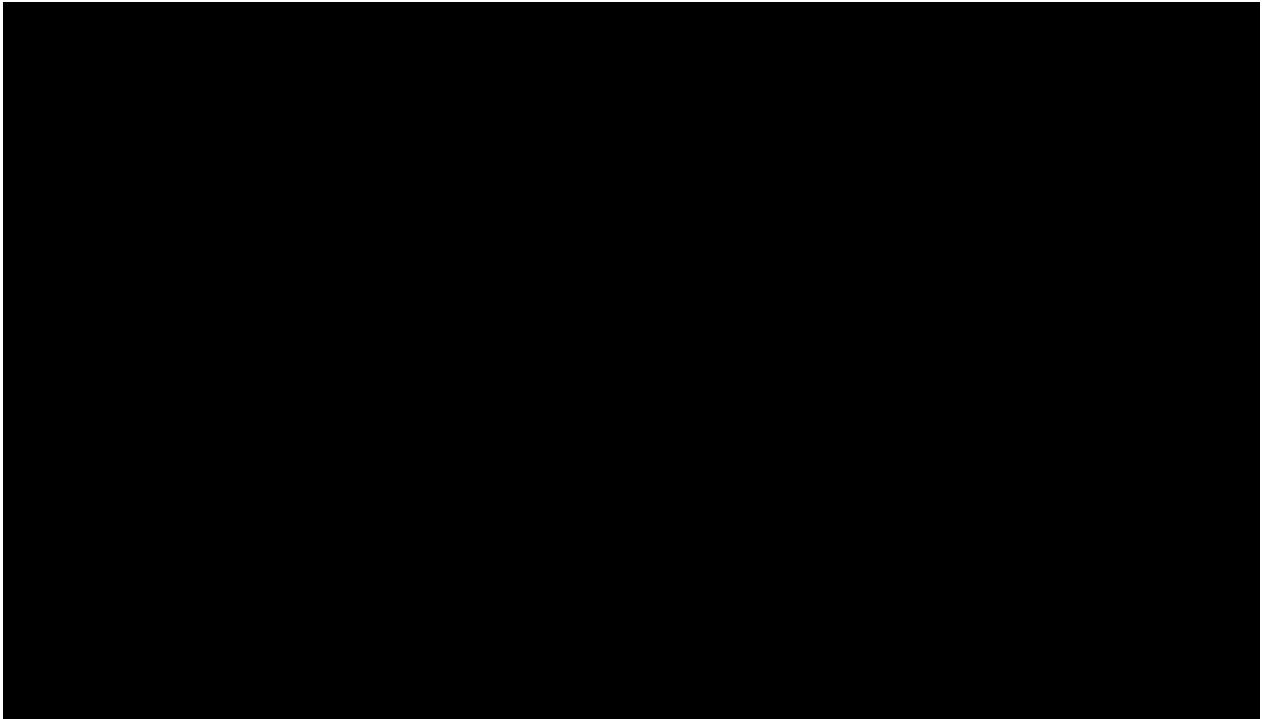


For the last Business Plan review in PR19, we conducted a comprehensive resilience assessment of our network using the well-established hydraulic modelling system Miser (provided by Ovarro). Miser is a computer-based system for modelling current and future water supply networks. In 2016-17 Ovarro built a Miser model of the Portsmouth Water network and led a resilience study quantifying the risk associated with a range of individual and combined failure scenarios (444 failure events, 2 supply/demand scenarios) and providing cost benefit analysis of several scheme interventions that fed into the Business Plan. In 2018, the model was updated, and the failure analysis was repeated to review bulk export options to the East and West.

The results of the study showed that our operational system already had a high level of resilience:

No properties were at risk of loss of supply from a single source of supply failure on an average demand day.

100,000 properties were at risk of loss of supply, for a proportion of the day, from a single source of supply failure on a peak demand day.

44 properties fed via boosters were at risk of loss of supply from a single source of failure on an average and peak day.

In 2019 the work was repeated to investigate the impact of three different schemes in relation to the Havant Thicket Water Supply Reservoir (HTWSR) under 1 in 1 (normal), 1 in 20 (dry), 1 in 200 (severe) conditions. A small number of failure events were added for this work.

Our Havant Thicket Reservoir is currently under development and will provide raw water storage. More details can be found in the Havant Thicket Supporting Document.

These exercises demonstrated that improvements were required to bolster resilience in the overall network. Several schemes were therefore included in the PR19 Business Plan for the period 2020 to 2024.

Additionally, studies have been undertaken on major above-ground assets to determine their vulnerability to external, severe circumstances such as flooding and other extreme weather conditions.

Following on from the work done previously, we are re-examining the resilience of our network. Again, we are utilising the power of Ovarro's Miser system to establish the resilience of our current network. However, this time, we will be testing the likely 2030 and 2050 networks to provide insights into potential future issues. Such information will help us design our network changes and provide a basis for adaptive planning exercises.

As in the PR19 work, for each of the 2030 and 2050 base configurations the scheme options will be modelled for each of the 1 in 1, 1 in 20 and 1 in 500 supply demand conditions, and for each failure scenario."

Where the failure of an asset has the potential to cause a failure in respect of one or more of our objectives, the asset concerned may be termed 'critical'. This factor is likely to be identified through the resilience exercises described above. Therefore, knowing the condition of such an asset is important as it is desirable that a critical asset is not allowed to fail trough deterioration but is rehabilitated at a sensible time in a planned activity.

As an example of addressing operational resilience, the following diagram (Figure 10) shows typical instances of externally and internally influenced risks and their appropriate proactive or reactive measures. It also demonstrates which of the four 'Rs' of Reliability, Recovery, Resistance, and Redundancy apply to the mitigation.

## Figure 10 – Using the four Rs to address Operational Resilience
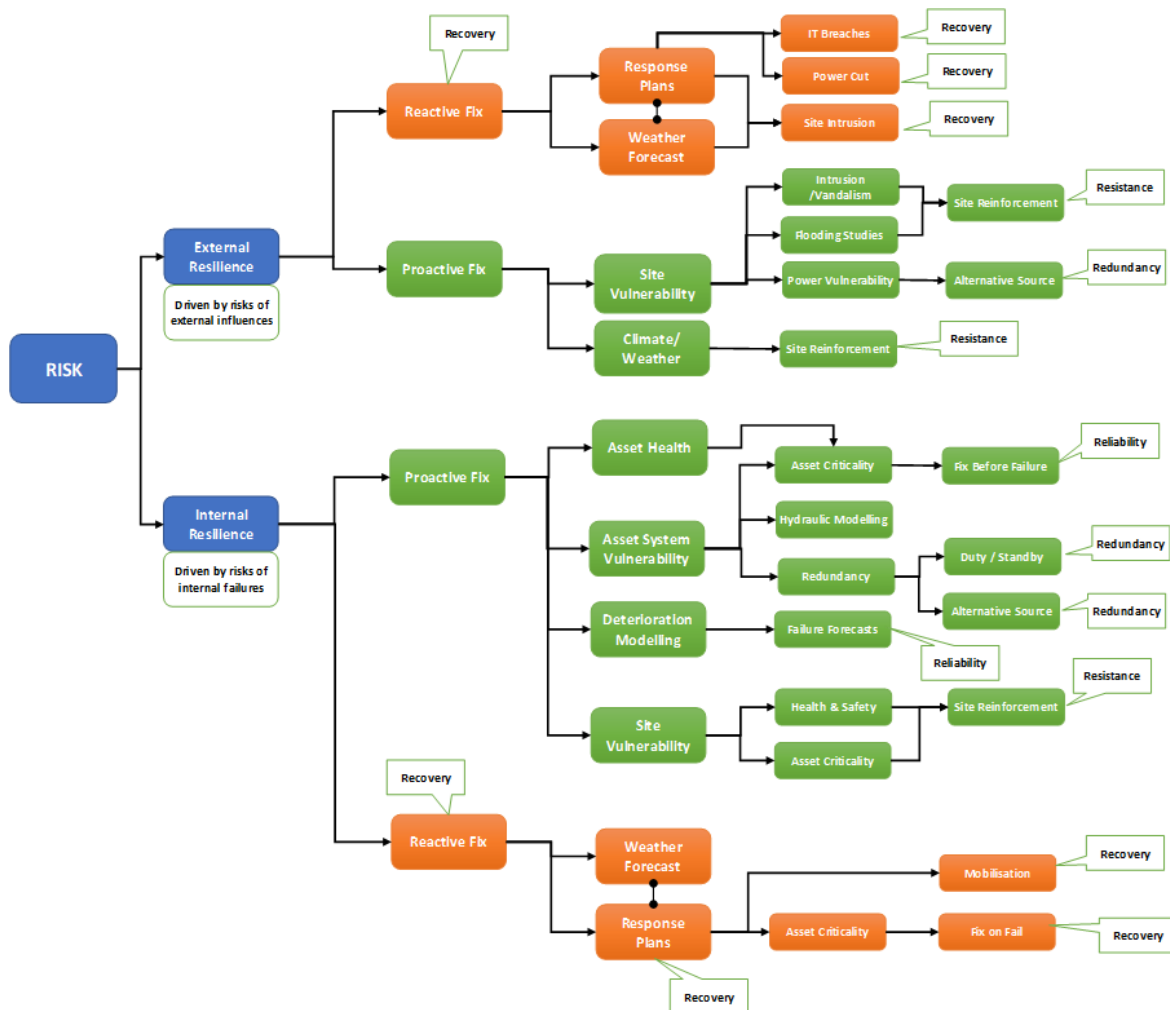
## Financial Resilience

The Company's financial structure has developed substantially over the past 18 months and has required a significant amount of ongoing assessment and review to ensure it remains as resilient for the next 50 years as it has for the previous period. Since the last Business Plan submission, the Company has bedded in a new shareholder, and dramatically ramped up the size of the business because of the Havant Thicket new Reservoir project. Further significant investment is proposed during this plan which is explained further in this document.

The changes to the financial structure have seen additional debt and equity injections to fund the reservoir construction and a further combination of both is scheduled for later in 2023 and 2024. Through this process we are aiming to reduce gearing to allow sufficient headroom should we need to borrow money to respond to unforeseen events.

Financial resilience is also very important to our shareholder. They have been raising additional equity during the year at a time when new injections into the industry are not proving straightforward, and without that resilience confidence that would not have been possible.

Another example of financial resilience and financial prudence to ensure customer priorities were always protected was the Company's approach to covid. In 2020, the Board took the decision to defer dividend payment for a year, and defer bonus payments to executives, whilst it assessed the potential financial implications of the pandemic. This decision to ensure the financial security of the business laid a financially resilient platform for the Company to build upon.

The deferred payments were paid later in the AMP. Our explanation of these deferred payments in our annual reporting could have been explained in a clearer manner and we continue to learn the lessons around transparency, however, the approach the Company took to secure financial resilience is clear to see.

One of our most significant financial concerns over the past few years has been the embedded debt that the business has had to finance. Until recently, this was the sole debt structure within the business and the rate, fixed in the late 1990's, was higher than the Weighted Average Cost of Capital (WACC) allowed by Ofwat at the last Price Review. The additional debt taken over the past year for Havant Thicket enables us to have a more blended debt structure in the business and work was completed recently to hedge the RPI linked loan indexation element of the legacy debt. These two changes have hugely improved the resilience of the financial structure of the Company.

## Regulatory and Statutory Compliance

Portsmouth Water has long been one of the best performing water companies in England and Wales and in 2020/21 was categorised by Ofwat in their "Service and Delivery Report" as sector leading. The following statistics provide a sense of our good performance.

## Table 1 - Representative Performance Values

| | PW | Minimum | Average | Maximum |
|---|---|---|---|---|
| **CRI (2020)** | 0.57 | 0.08 | 2.62 | 7.11 |
| **Leakage – exceeding target, Ml/d (2020/1)** | 7.5 | -2 | - | 7.5 |
| **Loss of supply. CML below target (2020/1)** | 3.81 | -62.01 | - | 3.81 |
| **C-Mex (2020/1)** | 86 | 73 | 82 | 86 |

Note: green cells show the best values across all companies in England and Wales in each category (source: DiscoverWater.co.uk)

In Ofwat's 'Service and Delivery Report 2020-21', Portsmouth Water was categorised as 'Sector Leading'."

To continue in that position the Company believes that proficient asset management is a vital component.

To gain a better understanding of how companies are managing resilience and asset health aspects, Ofwat collaborated with companies to produce a questionnaire entitled 'Asset Management Maturity Assessment' (AMMA. This contained several sections dealing with various aspects of asset management, asking companies to state their levels of maturity, giving evidence to support their assessments.

In April 2021 we submitted our reply to Ofwat. We subsequently received a response to our submission together with general, cross-company comments on the overall exercise. Ofwat identified several aspects within our submission that required improvement. The main points are summarised in the table below.

| Ofwat Comment | Current Situation |
|---|---|
| **Strategy & Planning** | |
| Regularly review and update its asset management policy and strategy<br><br>Improve the consistency of its processes and approaches to asset management and should develop an overall asset management strategy that aligns short, medium and long-term objectives<br><br>The focus of the company's asset management strategy was around the price review cycle, with less clear strategic objectives for the long term. | This process is now in place as it is incorporated within the Asset Management Policy and the SAMP<br><br>Our SAMP is now in place.<br><br>It includes details of our strategy for managing long to short term plans. In essence, we will treat all plans on a rolling basis from which periodic review plans can be extracted.<br><br>This is covered in more detail in the 'Future Challenges' section |

### Asset Information

| | |
|---|---|
| Ensure it collects sufficient and robust data to support its planning and decision-making by considering the development of asset standards or an information strategy or policy.<br><br>Improve its maturity in this area by developing risk studies for non-infrastructure assets, as this is not currently covered in its risk process. | We now have an Information and Data Management Policy and a Strategy in place.<br><br>Information is being linked to asset management processes.<br><br>Non-infra-assets already have criticality studies associated with them. This covers the risks related to asset failure. |

### Decision-making

| | |
|---|---|
| Consider developing a robust approach for setting and implementing risk tolerance levels across the asset base, involving stakeholders and customers.<br><br>Expanding its optioneering approach to be more reflective of wider value such as societal impacts<br><br>Assessment of costs and benefits for the long term could be improved going forward.<br><br>Portsmouth Water acknowledged that its metrics of benefit need to be widened and it has included the development of a revised value framework in its 2025-2030 road map work modules | The inclusion of a wide range of stakeholders in decision-making has already been undertaken in a few instances. This aspect is now covered in our asset management objectives and will be initiated where appropriate from now on.<br><br>Risk tolerance levels are set within each objective.<br><br>Improvements to these aspects are being addressed within our approach to long-term investment planning.<br><br>Our Copperleaf system incorporates a wide range of benefit types including societal and environmental aspects.<br><br>We will be making use of this facility in future plans. |

### Risk and Review

| | |
|---|---|
| Communication of asset risks up through the organisation needs improvement as the ability of frontline teams to report issues is limited at present<br><br>Further systematise its approach to asset management<br><br>Currently has no documented and systemised approach to asset management. | This has been addressed.<br><br>We have implemented a revised functional structure to asset management which provides a focussed approach to developing and delivering plans to meet objectives.<br><br>We now have documented asset management policies and strategies in place which direct how asset management activities are undertaken |

**Organisation and People**

| | |
|---|---|
| Consider defining clear roles and responsibilities around asset health and operational resilience to establish clear accountability and ensure a consistent approach across the business. | The SAMP provides guidance on roles and responsibilities. The Operation and Maintenance Strategy provides instruction on how assets are cared for and how information on asset health is provided.<br><br>Operational resilience is catered for through resilience studies and the employment of asset criticality. |
| The roles of the senior executive team did not explicitly include responsibility for asset health or operational resilience. | This aspect is now clarified. Senior executives have responsibility for all asset management aspects including asset health and resilience. |

We work very closely with the DWI and have been responding to a number of their formal Notices over the past two years, following inspections at our sites. The company has treated these Notices extremely seriously and allocated a considerable amount of time and resource to not only removing the Notices but also ensuring our procedures are fit for many years to come. The DWI have been very complimentary about the improvements made by the business and the new working practices that will be followed in the future.

# D. Future Direction

Resilience will always be a key priority for us because we know the significant impacts that can result from disruption to our services, and we need to act to maintain current levels over the next 50 years. Emerging threats such as climate change, cyber-attacks and economic pressures pose new challenges that we need to understand and mitigate against. Risks are increasingly complex, and this next section explains how we are dealing with those across a myriad of areas.

## Our Roadmap to becoming a resilient business

Although we have proved ourselves to be a strong resilient business over the past few years, we understand that we have work to do to become an exemplar in this area. To understand the journey, we need to undertake to reach those levels, we have partnered with Arcadis. They came into the business and took the time to engage with our workforce via numerous workshops, obtained insight into our position and prepared a roadmap. This sets an ambitious plan as to how we can become a sector leader in resilience less the conclusion of AMP8. This action plan is detailed below in Figure 111:

## Figure 111 - Road Map to the Vision
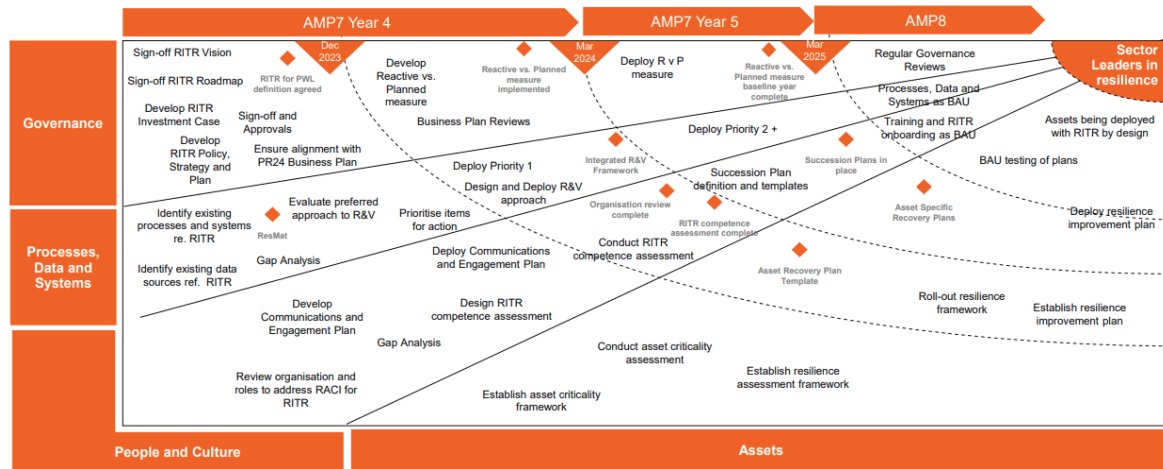


## Operational Activities

Portsmouth Water is a highly resilient operator with no hosepipe bans for almost 50 years, despite many extreme hot and dry weather periods, especially over the last decade. Supplies have also been maintained during the severe floods and cold snaps over recent years, as well as the freeze/thaw events that impacted much of the industry. The Company's network and connectivity proves an excellent ally in these events, but so does the time we take to learn the lessons from each event and revise our incident management plans.

However, the water resource situation is likely to change significantly in the future. Therefore, we need to ensure our resilience capabilities are tuned to meet such new challenges.

## Water Resilience

We update our Water Resources Management Plan every five years, so we are always responding to the latest evidence to ensure customers continue to receive a reliable and sustainable supply of water. The Plan describes how we will ensure we have sufficient, safe reliable drinking water to supply our customers for the next 50 years in the face of future challenges such as climate change, population growth and environmental pressures. The plan does not only focus on our customers, but also plays a part in delivering a best-value plan for the wider South-East.

The key elements of our plan are to:

- Construct Havant Thicket Reservoir by 2029 - see **PRT02**

- Install smart meters in most homes by 2035 - see **PRT07.06**

- Reduce water use to an average of 119 litres per day by 2050

- Halve leaks by 2050

As part of this Plan, we have worked alongside five other companies in an alliance called Water Resources Southeast to consider the needs of the whole area.

The key message from our Water Resources Management Plan is that we intend to increase resilience by making better use of the resources available to us. In addition to smart metering, we will offer support in water saving through increased water efficiency projects and will halve leaks by 2050. This will allow us to help protect the precious chalk streams and rivers in our area and allow wildlife to flourish.

## Energy Efficiency

The movement and treatment of water is energy intensive and therefore carbon intensive. To help our drive towards Net Zero, we are reducing our greenhouse gas emissions to play our part in minimizing future climate change. This is one of our greatest long-term risks as we rely so much on the weather.

We are expanding our solar arrays across our area of supply to create a grid to enable us to supply all the energy we need to power our buildings and over 30% of our pumping costs. Building on a tiny solar input we have made significant additions over the past 3 years to increase the power generated from arrays to 2.33 Giga Watt Hours (GWh). Over the next 5 years we are rolling our further schemes to increase by a further 4.8GWh. However, we are looking to go beyond this and drive innovation across all areas of our business, to support the local community in their resilience needs in this area. To that end, we are proposing to support a local developer with an environmental solution for their plans to heat up to 6,000 new properties close to Fareham in Hampshire. We are proposing to use an adjacent service reservoir to set up an ambient loop to extract heat from water, which when coupled with a heat pump, will provide the new properties with their heating requirements.

## Workforce Resilience

We could not function without the people that work for us, both directly and indirectly. Health and safety has always been the top priority for the business. We are building on 14 years of gold awards presented to the Company by The Royal Society for the Prevention of Accidents (ROSPA), and we have started a project to develop a single Occupational Health and Safety Management System that incorporates accessible Policies and Procedures, measures performance and drives the policy of the business. The draft documentation is being undertaken through a combination of HSE guidance, industry best practice and reviewing existing standards and guidance. In addition, a new Lone Working App was introduced recently, and this will be rolled out across the business.

In keeping with many in the industry, we are observing skills shortages in Science, Technology, Engineering and Maths (STEM). These skills are important to us as a business, and we focus much energy into recruiting in these areas. We partner with Portsmouth University to help to recruit in these areas, be that full time or for placement years. We also sponsor STEM fairs across our region where we can use water modelling tools to highlight the skills that we are looking for as a business.

Traditionally, we have had a strong local community presence amongst our workforce, and we know that their local knowledge and understanding of our customers is hugely appreciated by our customers and is a key element in our outstanding customer service performance over the past decade.

We take pride from investing in our future and continue to develop our staff to achieve their full potential. Over 40% of our staff have benefitted from external development whilst an employee, including our Apprenticeship program which has seen over £1m invested to develop our people in the Network and Production areas of the business.

We have undergone significant employee change over the past couple of years following a number of retirements, including replacing most of the Executive Team.  These changes were made in a smooth and planned manner because of the emphasis placed on succession planning at all levels of the business.

Equality, Diversity, and Inclusion (EDI) is a key focus for the business, and we have partnered with Engendering Change to understand and develop our business, so we ensure it is an attractive proposition for all our potential local workforce. Engendering Change is a local business in Portsmouth specialising in mental health, diversity, and Inclusion. We have also conducted employee surveys on this matter and are engaging with the workforce to understand where they think we can improve. An in-house Women's Network has gone from strength to strength, and we are actively trying to improve our gender pay gap position. We have started a partnership to try to recruit ex-military personnel into our business as we recognise that this further reflects a significant number of local residents, and, in addition to the university, we are working with schools to provide first time jobs to continue to add

social value to the community, whilst increasing the resilience of our workforce. We believe that these partnership and employment opportunities for local residents will also engender an element of loyalty and commitment to further increase resilience. Our People Strategy (PRT14) gives further details on these proposals.

## Physical and Digital Security

We take an integrated approach to the security of our sites and our systems, which we consider one of the highest risks to our resilience. We have a comprehensive cyber defence strategy and accompanying tools, which are examined regularly during penetration testing exercises and wider cyber maturity assessment. However, recent cyber-attacks in the industry, and within partnering contractors, have highlighted how prevalent the risk is and how important it is to have an ongoing programme of improvements and understand what should be done in the event of an attack to ensure the resilience of the organisation is not compromised. In the last 18 months we have employed Bridewell Consulting to conduct a cyber security maturity assessment and we have introduced a framework that allows us to assess the cyber protection capability of our supply chain. More recently we have performed another similar assessment with Aon who reassured us that our cyber defences are on a par with the rest of the industry. Mandatory training across all staff is in place and internal phishing campaigns used to assess and train the workforce against the risk of malicious emails.

We have revised our incident response plan and recently partnered with Weightmans and PwC, who provide technical, legal, and forensic expertise and support in the event of an incident.

We continue to enhance our physical security, including a recent programme to replace doors at external sites and the introduction of a Paxton Security System, initially on the manned sites, but this will roll out over the next couple of years across all operational sites. This technology allows us to use employees ID cards to limit entry and move away from more basic keys and key pads. Our security processes and procedures are audited annually in preparation for our statutory DWI Security and Emergency Measures Direction (SEMD) responses, and the information from those ensure we continue to follow best practices and ensure business continuity and resilience. The improvements over the past five years as a result of these audits include the card entry, alarm hatch covers and CCTV improvements.

## Emergency Planning and Business Continuity

We have a Emergency Planning and Business Continuity Plan established to allow the business to prepare for certain scenarios to understand how it will return to 'business as usual' as quickly as possible. We are guided in this respect by following the Security and Emergency Direction Measures Direction (SEMD) Notes issued by Defra. The plans are constantly reviewed and earlier this year the Audit and Risk Committee had a presentation from the Emergency Planning team on the structure that is set up to respond to these events, such as organised crime, extreme weather events, asset or system failures, and terrorism.

**The resilience around this matter can be split into four areas. –**

- Preparedness – we are committed to identifying and providing resources, plans and capabilities needed to deliver our essential services during disruptive events

- Business Continuity – Ensuring we can maintain critical activities during company wide disruptions

- Emergency planning – Understanding the key risks we face and developing robust plans to mitigate these and support other companies and agencies.

- Incident Management – Operate with a consistent incident management framework and maintain appropriate numbers of competent employees available to respond.

The Company undertakes both local and regional scenario testing exercises, usually with other utilities and emergency services and we continue to learn lessons after each event. We also consider our capabilities to deal with any other events that we see occurring across the industry or business at large.

## Resilient Supply Chain

We have a mature process and model for the assessment and management of our increasingly complex supply chain which we use to source a wide range of critical materials and services, including managing exposure to single suppliers. We have reviewed many critical suppliers for the reliability of the supply chain, highlighting risk of interruptions. In response to past events, we have taken action to improve resilience, identifying alternative suppliers and embedding sustainability checks in our standard processes, as well as an assessment of safety and environmental performance.

We also assess all new suppliers using the National Cyber Security Centre award-winning risk ledger platform.  This allows us to review all suppliers to ensure they are complying with best practice in supply chain security management as well as analysing their other cyber and data protection capabilities.  We also discuss with them how they can enhance and optimise our asset management practices.

We continue to endeavour to procure our supply chains to provide the best balance between value for money for our customers and the secure and confident provision of goods and services.

## Financial Resilience

The Company has traditionally had one tranche of debt, an Artesian loan, currently valued at £130m. However, an additional £170m debt for Havant Thicket was raised early in 2023 and is now available for drawdown as and when required. The Shareholder has also secured additional funds for the same project of £150m and this investment will take place in three tranches over the remainder of 2023/24. The combination of this extra financing will hugely add to the resilience of the business by combining different debt structures and maturity dates. Through this process we will also be reducing gearing to allow sufficient headroom should we need to borrow money to respond to unforeseen events.

## Stakeholders

### Customers

Our customers have played an integral role in the preparation of our Plan and ensuring the resilience of the water services across our area of supply and beyond. Through our intensive customer engagement, we have understood the communities wishes and desires for our business and there are several sections in this Plan that highlights how we have been guided by those customers. These include Understanding our Communities, Our Community Partnerships, and Delivering Outcomes for Customers. These Plans go further than we have ever gone before to ensure a resilient business.

The feedback to our Plans has been very positive, with overwhelming support for our Smart Metering Programme that will go some way to ensuring resources for both our customers and the southeast for the next 50 years and beyond. A reliable, uninterrupted service continues to be the number one priority for our customers.

We are also encouraging our customers to work alongside us to help is protect the local environment, enhance our catchment management activities assist us to locate leaks, all of which add resilience to our resources and quality of water.

Alongside those activities, we need to ensure we are addressing affordability and vulnerability issues for our customers. We are committed to delivering value for money services, including a bill that is as low as possible. As explained in this Plan we are committed to a new range of innovative social tariffs which we expect to make it easier for all our customers to continue to pay their water bills, thus ensuring our long-term resilience. Customers continue to fully support and develop our plans and have indicated a strong willingness to pay for the proposals we have submitted.

## Other Stakeholders

Our Customer Scrutiny Panel is made up of several of our key stakeholders ranging from large customers to regulators and local community groups. They have been closely involved in the preparation of our Plans and challenged the resilience of those Plans throughout the process. Coupled with the customer engagement this allows us to understand the priorities of our communities and develop ongoing community partnerships.

We are working with some of our large customers to identify where non-potable supplies (so water that is not suitable for drinking, but which may be used for other purposes) may be applied as we continue to investigate innovative ways of securing resilient resources. Work is also continuing with our hugely successful Catchment Management project, working alongside the Downs and Harbours Partnership to engage and influence farmers in respect of how they manage their land and the pesticides they employ. This activity over the past 10 years has held back the increasing nitrate levels in our resource and has allowed us to limit  blending activity where water with low nitrates is moved around the area of supply to mix with water with higher levels, or, in the longer term, much more expensive nitrate removal options.

Our Biodiversity activity and future plans is also an area where we work closely with our Stakeholders, be that Natural England as we partner with them to utilise our land situated in Sites of Importance for Nature Conservation (SINC) and South Downs regions or working with local community groups to ensure the chalk rivers and streams that are integral to our resource structure remain in healthy conditions.

All of our engagement with Stakeholders, including household and non-household customers, retailers, developers, regulators, employees and our shareholder is explained in PRT03.

## E. Supporting the 'Vision' and the Delivery of Performance Commitment Levels

Portsmouth Water's 'Vision' statement published this year contains several objectives that we have prioritised to be delivered within the next 25 years.  One of those priorities is to maintain a resilient supply system to our customers.

The 'Vision' has the support of customers and other stakeholders and has been produced through wide consultation as shown in the high-level process diagram below (Figure 2).

## Figure 12: High-level process for developing our 25-year 'Vision' statement
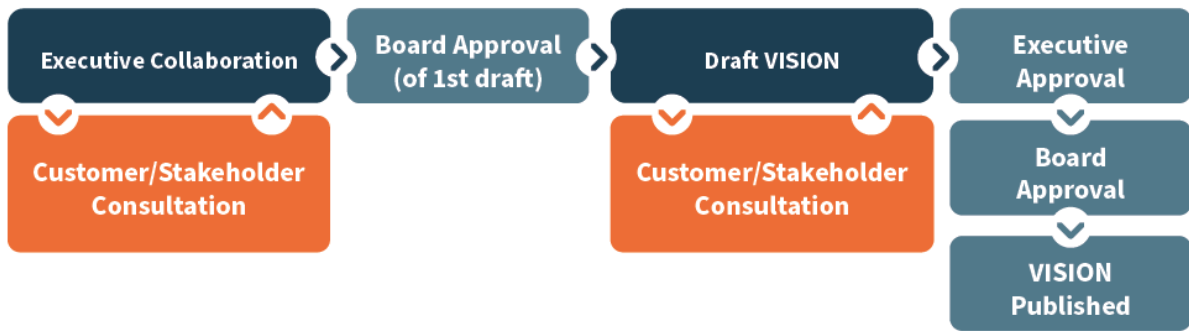


The proposals and plans for improving our understanding of resilience, as set out in this document, particularly in section 2.3.1, demonstrate how we will support the objective in our 'Vision' statement.

Our asset management system and, in particular, our strategic asset management plan (SAMP), set out how we convert organisational objectives into asset management objectives and subsequently develop asset management plans to deliver the required outcomes. In this way, resilience measures will be developed. The following diagram (13) illustrates the basic process.

## Figure 13 - Translating Vision Objectives to Investment Plans
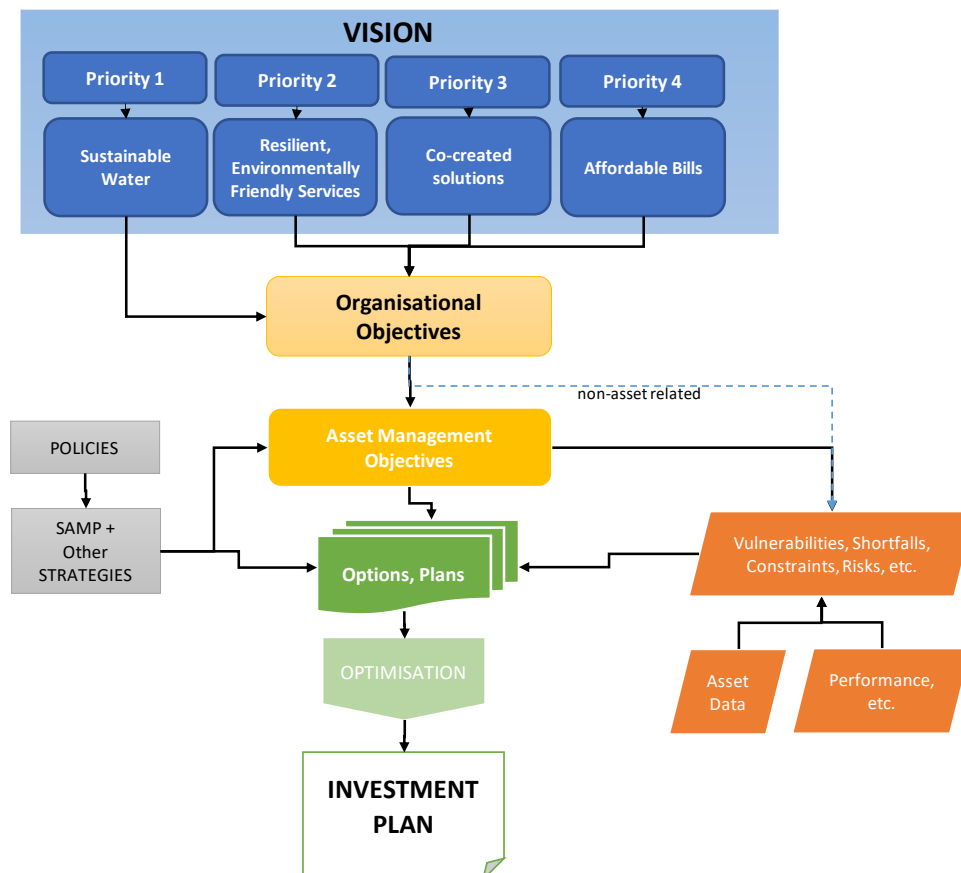
## Operational Resilience

Resilient networks provide significant benefits to our local communities through providing protection within our systems that substantially reduce the risks of supply interruptions.

As stated previously, our networks have historically been highly resilient. In addition, we have identified, through risk-based procedures, those elements of our asset systems that are most vulnerable to affecting our performance.

Our asset management and operational plans for AMP8 include initiatives for strengthening such understanding through greater knowledge about the health of our assets and the risks involved in the failure of particular types of assets.

Our Business Plan continues to build upon solid foundations as we continue improvements in understanding the resilience and critically of our assets system. The revised Water Resources Management Plan highlights the resource constraints we will encounter, and our Smart Metering proposals are one the key projects to deliver those savings.

## Corporate Governance and Corporate Resilience

The Board have overall responsibility for Corporate Governance in the Company and since the start of the last AMP have significantly increased focus on Risk and Risk management at Board Level. The Audit Committee has been renamed the Audit and Risk Committee and there are dedicated Risk sections in every meeting. In addition, each regular Board paper now has a risk section to complete prior to submission and external advice on improvements to the risk management systems has been obtained from Risk management experts. Active Risk management is now embedded in the business.

The Company complies with all Principles and Provision of both the UK Corporate Governance Code and the Ofwat Governance Principles and Board Leadership, Transparency and prepares detailed reports of these for publication within the Annual Report and Accounts each year.

There are many factors that the Company considers contribute to ensuring strong corporate resilience and these are proactively managed by the Company, led by the Board. In addition, the company focuses strongly on Environmental, Social and Governance (ESG) matters and assesses performance against a list of prearranged targets on a quarterly basis. Our ISO compliance in areas such as our Laboratory operations, regularly audited and assured give further evidence of our governance systems, This also dovetails with similar assessments that are being undertaken with our Copperleaf system and Value Framework.

### Figure 124- Corporate Resilience and Governance

# 4.GOVERNANCE AND ASSURANCE

Production of this supporting document has been undertaken in accordance with internal governance and assurance procedures and processes. Third party assurance has also been provided by Jacobs Global Consultancy.

This comprised initial drafting by an internal Lead Author under the direction of an Executive Owner who retains Executive responsibility for the document content including robustness and accuracy.

The document has undergone three stages of internal review and third-party assurance before being signed off by the Board. Internally this has included:

Executive Owner,

Nominated Executive,

Internal Executive Review Team including the CEO and CFO.

Details of the third party assurance, including findings/opinion, can be found in **PRT15.04**

The Board has been engaged in the development of the business plan and its content through subject specific discussions at monthly PR24 Steering Committee meetings that have taken place since late 2021. Minutes of relevant meetings are included in PRT15 Board Assurance, **Appendix PRT15.01**.

# GET IN TOUCH

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