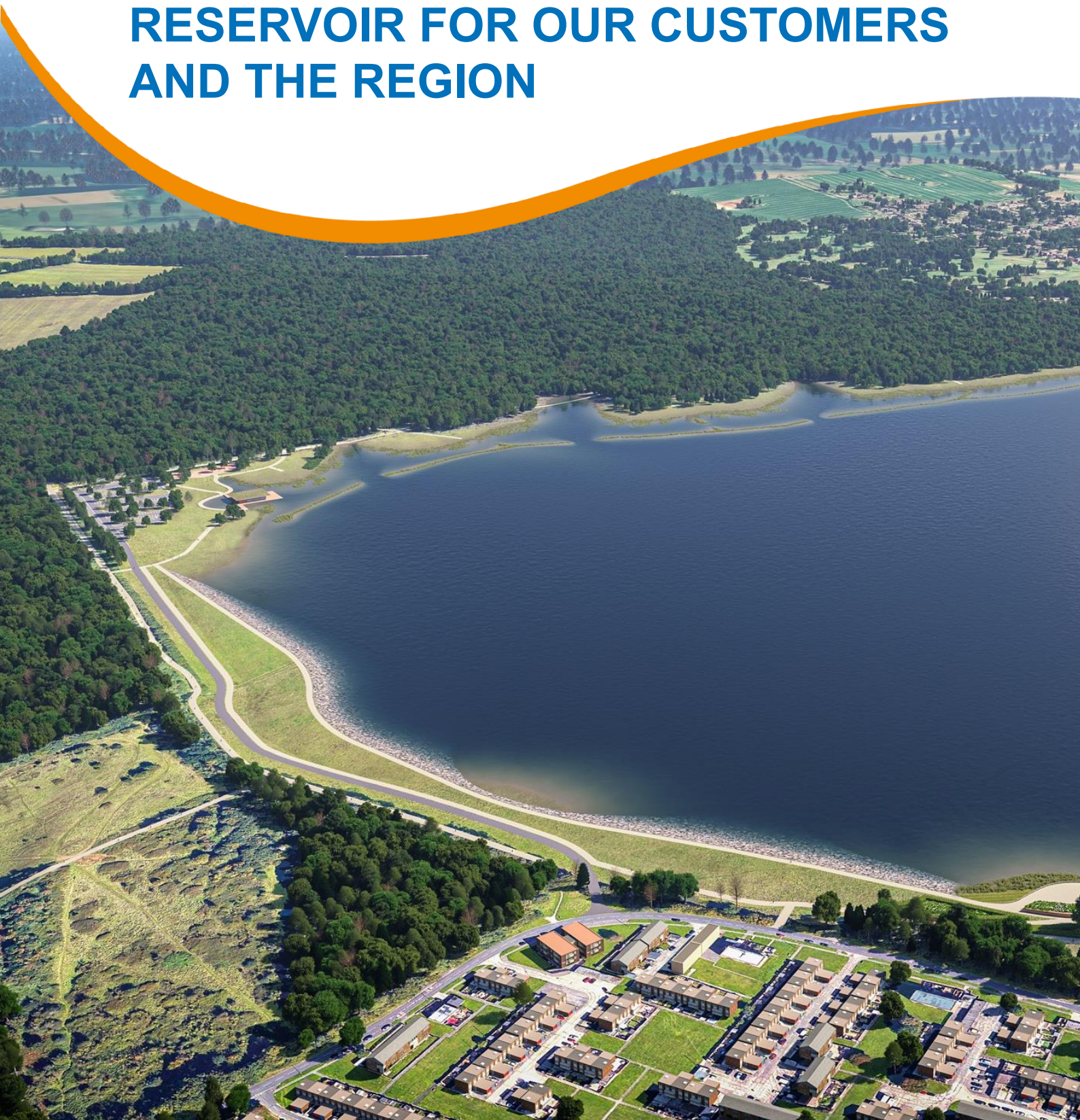


BUSINESS PLAN 2025 TO 2030

PRT02 DELIVERING HAVANT THICKET RESERVOIR FOR OUR CUSTOMERS AND THE REGION



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1. AT A GLANCE

The Havant Thicket Reservoir is an environmentally led project. The new reservoir will allow water to be supplied to Southern Water's customers and, in doing so, will facilitate a reduction in abstractions from the river Test and Itchen as well as increasing the resilience of future water supply. The successful delivery of the Havant Thicket Reservoir is key to Portsmouth Water realising its Vision of providing affordable, reliable and sustainable supply of high-quality water for its customers.

Portsmouth Water is delivering nature-based solutions that go beyond the reduction in abstraction of water from chalk streams, including rewilding projects, creation of ecologically important wetlands and a package of enhancement for many of the watercourses in the area. As well as providing wider environmental benefits, Havant Thicket Reservoir will generate a positive economic impact for the local economy, supporting the future economic and social development of the local area.

Figure 1: The Havant Thicket Reservoir



The Havant Thicket Reservoir will be the first in a series of new reservoirs, pipelines, and transfer facilities to be built following a change in policy supported by the National Infrastructure Commission. The sector is now adopting a twin-track approach where, alongside interventions aimed at reducing demand and tackling leakage, new infrastructure is being planned to provide a resilient water supply in the future. In addition, water resources planning is no longer a local water company issue and the whole industry will increasingly trade larger volumes of water across boundaries between water companies. Against this backdrop, the supply of potable water to Southern Water enabled by the Havant Thicket Reservoir is underpinned by an 80-year Bulk Supply Agreement, signed by both organisations in 2021. This contractual based guarantee of water resilience provides the step change that is needed to address future challenges faced by the sector and embodies the spirit of collaboration that has seen water companies coming together in regional groups to identify potential solutions.

Water trading with Southern Water has opened the door to lower cost water resource options that can secure affordable bills for customers and increase social value. A key to achieving efficient costs for customers is provided through the evidence of achieving planning consent first time, proactively working with opposition groups and securing a high level of support from our customers.

Portsmouth Water has stepped up to deliver the Havant Thicket Reservoir on a timescale that sets a high bar for the industry. In the space of the four years from 2018, this project has overcome significant hurdles, put in place a novel contractual arrangement with SWS, secured planning consent, secured regulatory approval from Ofwat, run two large procurements, appointed main works contractors, constructed the trial embankment, sensitively removed ancient woodland and begun a substantial programme of environmental works which will result in net gain.

Portsmouth Water has also shown leadership and ambition to shape how the water sector addresses the challenges posed by scaling up the capability to deliver major projects and programmes.

Portsmouth Water is constantly seeking ways to innovate and drive efficiency into the Havant Thicket Reservoir Project. This is demonstrated by the supply chain strategy adopted for the Project, the use of alternative innovative construction techniques to minimise the impact on customers and the environment, and our commitment to tree translocation.

Portsmouth Water has engaged extensively with its customers and stakeholders at every stage of the development of the Havant Thicket Reservoir. It has been maintained the strong support which was established during the planning application process, ensuring that stakeholders continued to feel informed about the Project and seeking their input towards the development of detailed plans for construction and operation.

In January 2023 Portsmouth Water agreed an increase in funding through a cost adjustment mechanism provision in the ten-year control. Ofwat agreed to increase totex allowances to £310m (2017/18 prices). Professional Indemnity Insurance costs under the main works construction contracts will be a pass-through cost to customers. Totex allowances will be adjusted for changes in steel, concrete and diesel prices over and above those costs priced in the main reservoir contract.

Our business plan has been submitted in line with the cost adjustment mechanism agreed in January 2023, however, at the time of writing this Business Plan, it has been agreed to future-proof the reservoir, to provide the capacity and flexibility to support a SWS scheme called the Hampshire Water Transfer and Water Recycling project. This project aims to utilise highly treated recycled water, which would increase the environmental benefits of the reservoir. Portsmouth Water has signed a commercial agreement with SWS to enable the reservoir to progress works now, which will deliver significant savings to SWS customers and reduce the environmental impact of the works, when compared with implementing changes later. It has been agreed with Ofwat that this change in scope will be addressed through a second Cost Adjustment Mechanism in order to establish a new regulatory allowance for the project in 2024.

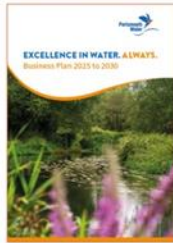
In the PR19 determination for the Havant Thicket Reservoir, it was envisaged that the operational costs for the reservoir would be considered at PR24. Given that the introduction of this change is expected to have an impact on the completion date of the project and on the operating costs,

Portsmouth Water intends to review the operational costs as a part of this second Cost Adjustment Mechanism in 2024.

In parallel with the second Cost Adjustment Mechanism, the Havant Thicket Reservoir Bulk Supply Agreement between Portsmouth Water and SWS will be updated to address the practical and commercial impact of these changes. This is just one of the many ways that Portsmouth Water is working collaboratively with others to find innovative and regional solutions that will protect the environment and minimise impact to customers.

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

<p>PRT02 Delivering Havant Thicket Reservoir for Our Customers and the Region</p>	<p>PRT03 Engaging and Understanding Our Customers and Communities</p>	<p>PRT04 Delivering for Our Customers and Communities</p>	<p>PRT05 Delivering Outcomes for Our Customers</p>	<p>PRT06 Managing Our Resilience in the Long Term</p>
<p>PRT07 Our Investment Plan</p>	<p>PRT08 Delivering Our Investment Plan</p>	<p>PRT09 Securing Value for Money</p>	<p>PRT10 Innovation to Enhance Our Service Delivery</p>	<p>PRT11 Addressing Affordability and Vulnerability</p>
<p>PRT12 Accounting for Past Performance</p>	<p>PRT13 Aligning Risk and Return</p>	<p>PRT14 Our People</p>	<p>PRT15 Board Assurance</p>	

Vision and Our Long-Term Plans

<p>PRT16 Our 25-Year Vision (consultation version)</p>	<p>PRT17 Water Resource Management Plan (revised)</p>	<p>PRT18 Long-Term Delivery Strategy 2025-2050</p>
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3. DELIVERING HAVANT THICKET RESERVOIR FOR OUR CUSTOMERS AND THE REGION

a. Background to the need for the Project

Ambition for the Sector

The Havant Thicket Reservoir ('the Project') will provide 8.7 billion litres of raw water storage, retained by an earth-embankment dam, and will take 10 years to design, construct and commission. The last time a comparable reservoir was built in the UK was in 1989-1992 at Carsington (a dam reconstruction) in Derbyshire, so the Project will be creating a new capability of UK expertise. The Project will enable Portsmouth Water (Portsmouth Water) to supply Southern Water Services (SWS) with 21 Ml/d of potable water under an 80-year Bulk Supply Agreement (BSA), signed in 2021.

Portsmouth Water took on the responsibility for delivering the Project to meet commitments made by SWS in its Section 20 agreement with the Environment Agency (EA), in March 2018; and although this timetable was not set by Portsmouth Water, it has shaped the regulatory approach and the way in which the Project has been executed. The timeframe for delivering the Project is extremely challenging, particularly given the seasonal nature of the works and the fact that this is the first such reservoir since Carsington.

Portsmouth Water has risen to the challenge based on the commitments made by SWS and its own commitment to address water resources constraints in the South-East of England. Portsmouth Water has shown leadership and ambition to shape how the water sector addresses the challenges posed by environmental needs, population growth and climate change.

The National Strategy

In 2018, following a detailed study completed by the water industry, the National Infrastructure Commission produced an important 'state of the nation' report about our national water infrastructure called 'Preparing for a Drier Future'¹. The report observed that England faced a potential shortfall of 4 billion litres of water a day in meeting demand in the 2050s and this resulted in a dramatic change in government policy. For the preceding 30 years, there has been focus on demand side reductions aimed at reducing leaks and water consumption by customers. The report made it clear that this policy would need to change to avoid future water shortages. Leakage and demand reduction continued, but in addition, there was a need for a 'national transfer network in England and new infrastructure, such as reservoirs and water re-use systems.'

The Project will be the first in a series of new reservoirs, pipelines, and transfer facilities to be built following this change. Water resources planning is no longer a local water company issue and the whole industry will increasingly trade larger volumes of water across boundaries between water companies. Existing rivers and canals may be used in the future as part of the solution to move water from where it is available to where it is not. The South-East, as a water stressed area, is a critical location for several major schemes which include the construction of new reservoirs, major pipelines, desalination plants and water recycling plants. More recently, the national ambition to restore our natural environment means that licensed abstractions from rivers and boreholes will also reduce, in turn reducing the supply capacity of most water companies.

¹ <https://nic.org.uk/app/uploads/NIC-Preparing-for-a-Drier-Future-26-April-2018.pdf>

Regional Water Resilience

Portsmouth Water has led the way in regional water resources planning by developing a regional alliance with SWS to secure a resilient network which minimises the need for water use restrictions. The initial phase of the works was to develop the project at PR19 which delivers 21 MI/d to SWS under circumstances up to a 1 in 200-year drought. This requirement to supply SWS was underpinned by a Bulk Supply Agreement signed by both organisations in 2021. This contractual based guarantee of resilience provides the step change that is needed to address climate change. When compared to alternative technologies such as desalination, the Havant Thicket Reservoir project is clearly the best option.

Portsmouth Water has led the sector with the partnership that it has co-created, funded and delivered with SWS and its innovative approach to water trading with SWS. The innovative Bulk Supply Agreement that Portsmouth Water has developed with SWS provides a template for financing infrastructure across water company borders which other companies can adopt. Portsmouth Water has already engaged with other water companies looking to put similar arrangements in place.

Hampshire Water Transfer and Water Recycling Project

Having developed plans for the Project, Portsmouth Water is now engaged in the next phase of the regional water resource planning and is working with SWS to support the Hampshire Water Transfer and Water Recycling (HWTWR) Project. SWS is developing plans for the HWTWR Project which, if approved by regulatory bodies, will see an additional deployable output of up to 90 MI/d being sourced from the Project by supplementing the reservoir with high-quality recycled water. If approved, the HWTWR Project will provide further benefits to protect globally rare chalk streams and provide increased certainty around water supply resilience for the whole South East region.

In June 2023, Portsmouth Water and SWS entered into an agreement which will allow Portsmouth Water to progress 'Alignment Works' between the Havant Thicket Reservoir and the HWTWR Project. These Alignment Works will ensure that the reservoir and associated pipe network has the capacity and flexibility to accommodate additional flows of water into and out of the reservoir, if SWS secures approval needed for the operation of the HWTWR project. By carrying out this work now, rather than after completion of reservoir, Portsmouth Water can significantly reduce the carbon impact, disruption to our local community and cost of the works to SWS customers.

Portsmouth Water looks ahead to securing planning permission and the execution of a second Cost Adjustment Mechanism in 2024 which will provide the flexibility required to incorporate the Alignment Works into the scope of the Project. It should be noted that the incorporation of these works may impact the Project's programme by delaying commissioning of the scheme. However, Portsmouth Water and SWS are working to minimise this impact as far as possible.

In the PR19 determination for the Havant Thicket Reservoir, it was envisaged that the operational costs for the reservoir would be considered at PR24. Given that the introduction of this change is expected to have an impact on the completion date of the project and on the operating costs, Portsmouth Water intends to review the operational costs as a part of this Cost Adjustment Mechanism in 2024.

In parallel with the Cost Adjustment Mechanism, the Havant Thicket Reservoir Bulk Supply Agreement between Portsmouth Water and SWS will be updated to address the practical and commercial impact of these changes. This is just one of the many ways that Portsmouth Water is working collaboratively with others to find innovative and regional solutions that will protect the environment and minimise impact to customers.

b. Environmental Value

Havant Thicket Reservoir is an environmentally led Project that, despite its size, will deliver a net gain to wildlife habitats. The key driver for the Project is to reduce the abstraction of water from chalk streams to protect the wildlife that relies on this globally rare habitat. Portsmouth Water has proposed nature-based solutions that go beyond the reduction in abstraction of water from chalk streams, including the 80-hectare rewilding project, creation of ecologically important wetlands and a package of enhancement for many of the watercourses in the area. Building the reservoir will also make the whole South-East much more resilient to droughts, which are likely to happen more often in the future due to climate change. We will:

- Make a positive contribution to local and internationally important habitats by:
- Enhancing and restoring woodland connectivity
- Extending areas of wood pasture
- Restoring native ancient woodland in Forestry England's Havant Thicket
- Creating a significant area of new woodland
- Creating a mosaic of habitats (including open clearings)
- Creating a large new wetland edge & open water habitat
- Restoring significant areas of watercourse
- Utilising a Capital Grant Scheme to create new habitats/ monitor populations
- Look at environmental opportunities in the construction process itself, e.g. embankment methods, carbon footprint, embedded carbon, on-site manufacturing of construction materials
- Minimise environmental impact whilst being cognisant of the cost impact
- Support "whatever the scale" ideas, e.g., smaller-scale initiatives such as plastic-free café, single use plastic free site
- Support longevity and whole life cost to deliver environmental sustainability
- Contribute to Portsmouth Water's Environmental Sustainability and Biodiversity Targets
- Ensure an environmental exemplar in sustainability
- Ensure terrestrial habitats will be recreated elsewhere.

We are committed to compensatory measures relating to the loss of ancient woodland. This includes on-site woodland and wood pasture creation and on-site ancient woodland enhancement. It also includes off-site creation and/or enhancement.

Extensive surveys have already been carried out to look for and monitor wildlife such as dormice and bats and new habitats have been established for wildlife to migrate to before work to build the reservoir begins.

Figure 2: Tree translocation at the Havant Thicket Reservoir construction site



Portsmouth Water has adopted an environmental approach that leads the industry: in October 2021, the Project was recognised for outstanding engagement with communities and stakeholders, winning a prestigious Chartered Institute of Ecology and Environmental Management award. The Project has also been commended by the Environment Agency for its rewilding project and having successfully engaged with a local opposition group who are now supporters of the Project.

Water Industry Net Zero and Water Resilience

We will support the UK's Net Zero Carbon target by minimising, where practical, greenhouse gas emissions at all stages of the infrastructure lifecycle, and maximising opportunities for greenhouse gas removals through sequestration by vegetation and renewable energy generation.

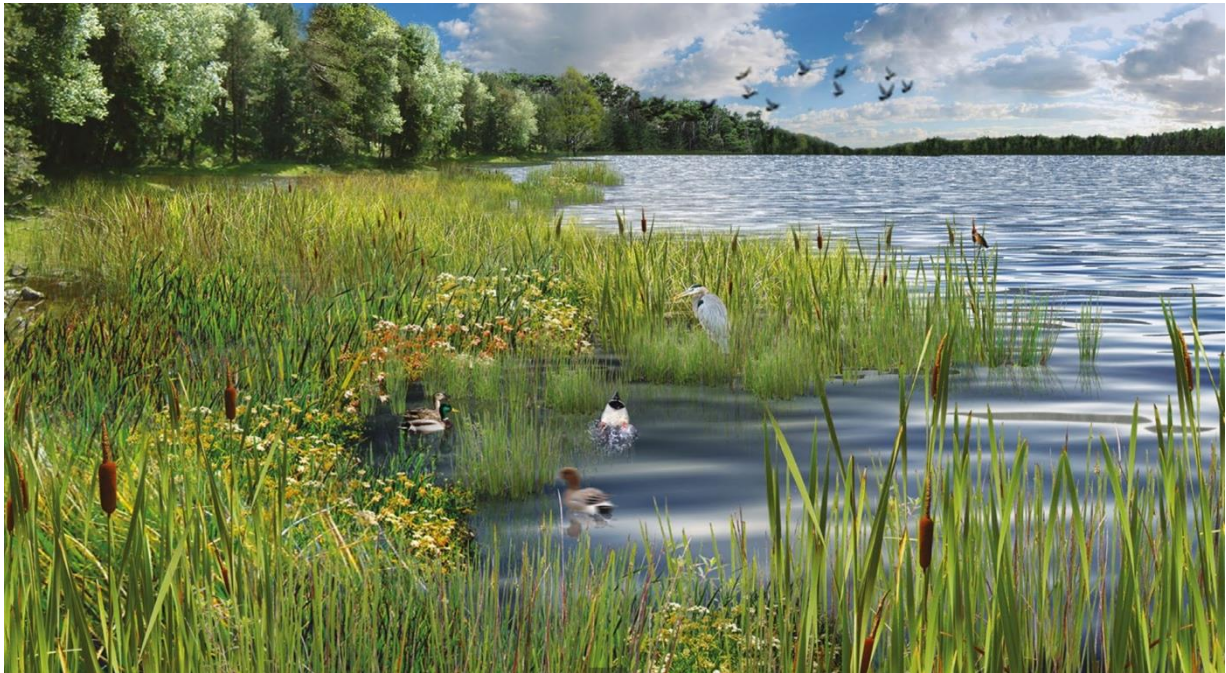
The Project will support the UK's Net Zero Carbon Target which has been adopted by the Water Sector

We are now designing the Visitor Centre, which will be open to the public before the reservoir becomes fully operational. Like the rest of the project, the Visitor Centre will be environmentally friendly, and our target is to achieve a rating of 'Very Good' by the international Building Research Establishment Environmental Assessment Method (BREEAM), which would put it in the top 25% of commercial buildings in the UK. The Visitor Centre will provide a café, toilets and an educational centre, and will be built using timber sourced on the site, renewable energy and a living roof.

The Wetland

The reservoir gives us a great opportunity to create a new wildlife conservation area. Wetlands are a vital habitat for wildlife and people, but they are coming under increasing pressure from pollution and droughts. We will create a sustainable wetland along the northern shore of the reservoir to offer a new home for a wide range of wetland wildlife and to be experienced and enjoyed by the public.

Figure 3: Indicative view of how the wetland might look

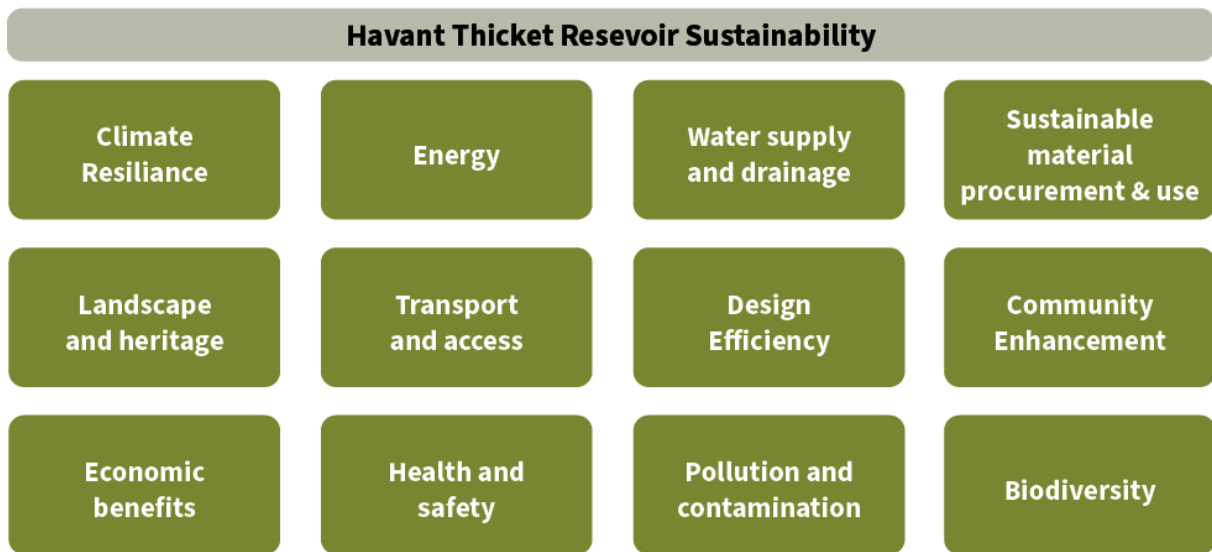


Our Sustainability Policy

Sustainability is a multi-faceted topic that relates to the environmental, social and economic well-being of a project and has central importance to all aspects of this. The reservoir's primary sustainability purposes are to protect the environment and to ensure water security.

In addition to these, another key aim of this project is to achieve high sustainability performance by delivering project design solutions developed through good integration with all stakeholders and their requirements.

Figure 4: Sustainability topics considered by the Project



c. Exceeding Performance Commitments

Portsmouth Water has stepped up to deliver the Project on a timescale that sets a high bar for the industry. In the space of the four years from 2018, the Project has overcome significant hurdles, putting in place a novel Bulk Supply Agreement with SWS, securing planning consent, regulatory approval from Ofwat, running two large procurements, appointing main works contractors, constructing the trial embankment, and clearing sensitive ancient woodland.

Figure 5: Trial embankment at the Havant Thicket Reservoir construction site



This was completed through the period of the Covid-19 pandemic, in the context of the macro-economic impact of the war in Ukraine and in parallel with the evolving regional water resource planning process. The pace of the Project has been driven by the challenging Section 20 obligations that SWS has agreed with the Environment Agency.

Portsmouth Water has risen to the challenge of high levels of performance risk; despite the challenges of the last four years, Portsmouth Water has kept to the performance commitments set out at PR19 and the Project remains on track. This is an exceptional achievement and will lead to lower customer bills.

In addition to the performance risk on delivery, Portsmouth Water has negotiated a first-of-a-kind contract which guarantees the supply of water to SWS under circumstances of up to a 1 in 200-year drought. This is the first bulk supply arrangement in the UK that has been used to raise finance for water supply infrastructure and demonstrates Portsmouth Water's ambition to define its leadership of the sector.

d. Social Value

Customer Bills

Water trading with SWS has opened the door to lower cost water resource options that SWS previously did not have, providing a solution that is based on the recovery of high-quality low-cost spring water that would otherwise flow out into the sea.

This approach has paved the way for other water companies to develop regional solutions.

A key to achieving efficient costs for customers is provided through the evidence of achieving planning consent first time, proactively working with opposition groups and securing a high level of support from our customers. Success first time, in a challenging environmental context, has been critical to securing affordable bills for customers.

Portsmouth Water has successfully run large procurements and, despite the challenges faced by the construction industry in 2021 and 2022, secured two main design and construction contracts. Ofwat and SWS have agreed that the value of these contracts are in line with the market. Nonetheless Portsmouth Water has accepted an Ofwat efficiency challenge through the CAM process to ensure that customer bills are kept to a minimum.

From a strategic perspective, the Project provides a precedent for other water companies to follow. It represents the first step in creating a market for new reservoirs in England and Wales. Lessons learned from the Project will be applied to future reservoir schemes to ensure efficient delivery. Creation of a new and efficient market for new reservoirs will ultimately reduce the impact on customer bills across the country.

Wider Economic Impacts

The reservoir will generate a positive economic impact for the local economy, supporting the future economic and social development of the local area. The Project will:

- Improve sustainable tourism in the local area
- Support construction firms operating within the region and provide jobs in the industry
- Create jobs to manage and run the reservoir and visitor centre
- Lead to the creation of new direct and indirect jobs, through supply chain benefits and new expenditure introduced to the local economy
- Create additional amenities that will drive regeneration
- Offer opportunities through a range of Modern Apprenticeships

Project Health, Safety and Well-being on Site

Our key objective is to maintain our high standards in relation to health, safety and well-being. We aim to have no major incidents on site, to ensure that health and safety is reaching a level above industry “norms” and to promote good industry standards and working practices.

Given the scale of the Project, a Project Health, Safety, Well-being, and Environment (HSWE) Leadership Team has been formed, consisting of H&S and Environmental managers and key representatives from Portsmouth Water and each of the Project contractors. This HSWE Leadership Team is focussed on maintaining an open culture that promotes, ‘Safety Always’, sharing lessons learned and best practice and proactively preparing for future challenges through training, campaigns and safe working practices.

Providing New Community and Leisure Facilities

Portsmouth Water wants to create a place for people of all ages to stay active and healthy, learn more about water and wildlife and get together as a community. A visitor centre, car park, play and picnic areas, and a bird-watching hide will be grouped together to create an attractive and accessible hub for local communities.

The visitor centre will be located on the waterfront in the north-western corner of the reservoir site with direct views across the wetland and reservoir. The visitor centre is being designed to fit in with the character of the natural environment using natural materials such as wood available on-site. The visitor centre will include a café, toilets and space for community and education activities.

As well as being supplied with water from the reservoir, our customers will have the benefit of a new, community leisure and environmental facility on their doorstep. The reservoir site will create a new, healthy, and safe place for people to visit – with footpaths for walking, cycling and horse riding, facilities for bird watching, picnic and play areas and car parking.

Figure 6: Indicative Visualisation of Visitor Centre



Education

- The educational bird hide is being designed to accommodate a school group with a lobby area. A brand-new wetland habitat to encourage different wildlife to the site will be created. The area will be used as an educational resource, to assist in providing teaching experiences through the school curriculum and adult education, to help educate the community about nature and our impact on the environment. It will attract different bird species which will encourage bird watchers. Boardwalks through natural wetland planting will bring the community closer to nature and viewing locations for the wetlands will be at the end of gated pathways preventing access for dogs and minimising disturbance.
- Portsmouth Water are also providing educational visits to the reservoir site during construction for students. An educational group has been established, working with local schools and partnering with the University of Portsmouth. The educational group will develop educational resources and maximise opportunities for learning as the project progresses through design, construction and into operations.

Figure 7: University of Portsmouth students visit the site

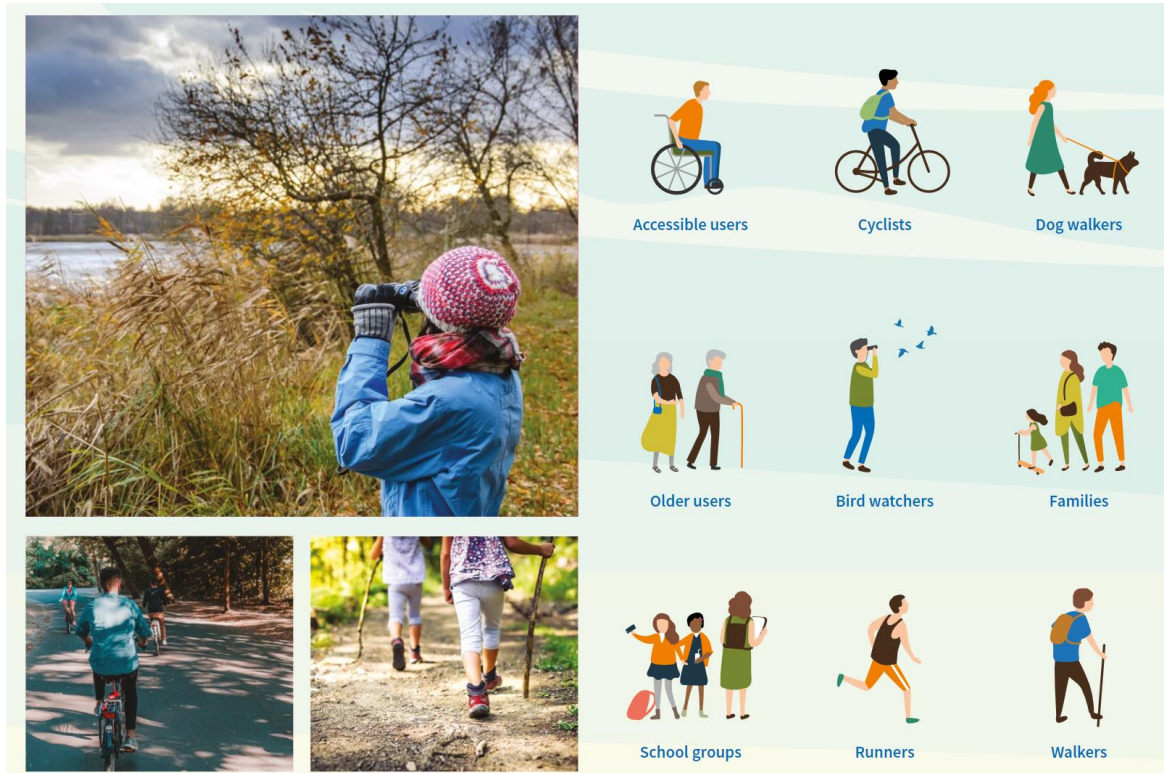


Working with the Public

We are working with the public to develop the plans and have brought together representatives from a broad range of organisations including local councils, Forestry England, walking and cycling groups, wildlife groups, community organisations and schools to discuss key issues and obtain feedback.

At present there is support for a bridge concept, and waterside location, as part of the visitor centre, providing additional wildlife experience, separate volunteer facilities and natural materiality for the buildings in keeping with the local landscape.

A wide range of visitors are expected, as shown in the picture below:



Volunteers

We will create a reservoir with many different uses and potentially up to 190 volunteers could assist on site to work in the visitor centre or on the site. We are considering use of schemes such as the Duke of Edinburgh's award and Citizen's Programmes.

Figure 7: Volunteer metal detectorists search the site



Memorial Garden

Portsmouth Water has worked closely with Havant Borough Council to establish a new memorial woodland to give local people a place to visit for quiet reflection and to remember those who have passed away. The scheme resulted in three thousand trees being planted at the Memorial Garden in 2019, creating an enhanced green space just off Swanmore Road in Warren Park, next to where the reservoir is set to be built. A further 3,000 trees were planted at Gipsies Plain, west of Rowlands Castle.

By planting these trees in 2019, the woodland had time to become established and provide habitats long before any steps were made to progress the reservoir.

These trees are creating a valuable new wildlife habitat, providing connection between other areas of woodland nearby and further afield. This means that birds and mammals, such as dormice and bats, have been able to move around and feed more easily. The trees are protected by deer fencing and Portsmouth Water are committed to ongoing maintenance of the Memorial Garden to ensure its enduring growth.



“The planting of the memorial woodland offers a peaceful place, accessible to all, that enhances local biodiversity and wildlife. Importantly, we want the woodland to be a further way of commemorating those who served in the two World Wars and other conflicts, and we are developing a plan around this. This includes an educational aspect, teaching young people about our area’s connection to the armed forces and service for our country. It’s a real privilege to see this project grow and I can’t wait for everyone to be able to enjoy.”

Councillor Prad Bains, Mayor of Havant who conceived the idea to set up the memorial garden.



e. Innovation and Efficiency

Realising efficiencies through design innovation

Portsmouth Water and its appointed pipeline construction contractor (Ward & Burke Construction Ltd) have investigated ways to improve the route of the pipeline, to further reduce its impact on local communities and the environment. This is in light of alternative innovative construction techniques, which would allow the scheme to be delivered more efficiently and effectively. As a result, a new pipeline route and design have been identified.

The new pipeline design would result in less disruption to local communities and a lower impact on the environment compared to the original scheme, with the required working zones limited to just where the access shafts are needed and two open cut sections. It would also mean lower carbon emissions during construction, compared to the original route. It is estimated that the new pipeline route would result in 719 fewer tonnes of carbon being generated as it is built and approximately 2,500 less HGV movements.

Nature Based Solutions

The Project is delivering nature-based solutions through projects including planting more than 6,000 trees on the edge of the reservoir site, an 80-hectare rewilding project and carrying out extensive improvements to established woodland in nearby Southleigh Forest and Havant Thicket. The 80-hectare rewilding project at South Holt farm, around 2km from the reservoir site, is using an innovative process known as natural regeneration. The rewilding project works on the principle of using natural processes where possible, which will result in a resilient range of habitats with a lower carbon footprint when compared with other methods of tree planting.

Another example of the work done recently is the removal of the non-native and dying Norway Spruce, and some suppressed Scots Pine. This will increase light levels in and around ponds and help improve oxygen conditions, all of which will benefit wildlife.

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*'This work will improve the quality of the woodland and is likely to prevent the spread of a serious pest threatening spruce trees in the South East of England. The large eight-toothed European spruce bark beetle (*Ips typographus*) kills spruce trees by nesting and feeding under their bark. Once dead, the trees pose a safety risk to the public.'*

'While the beetle is not currently found in Havant Thicket, removing these spruce trees will help prevent the spread of infection across the South East.'

Forestry England Project manager Marcus Stroud

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Enhancing our environmental compensation targets

The Havant Thicket Reservoir received planning permission following extensive review by planning authorities and statutory consultees, including Natural England and the Environment Agency. The reservoir site was chosen for its proximity to a source of water, the geography of the land to provide a reservoir with the right capacity and for its source of clay which we are using to build the embankment. The site was also chosen, in comparison with over 70 alternatives, because it would result in less tree loss than many alternative locations. However, it was inevitable that there would be a loss of trees and a compensation strategy was agreed in which over 200 hectares of new and improved woodland and wood pasture could be created, and ancient woodland soil would be translocated.

A local protest group was not satisfied with the compensation strategy and so Portsmouth Water invited them to propose further measures that could be incorporated into the project. This resulted in a 'sapling rescue project', aimed at preserving the genetic history of the woodland and including a target to save 80 trees from being felled and moving them to other parts of the site. With the help of contractors and local volunteers, the sapling rescue project exceeded expectations and resulted in:

- 250 oak trees grown in a sapling nursely created at Gipsies Plain, from seeds gathered from the ancient woodlands on the reservoir site
- 250 saplings including beech trees, hawthorn, elder, hazel, oak, holly and yew rescued and translocated before construction started
- Bluebells translocated before construction started
- 250 trees protected from felling and translocated along with ancient woodland soil.

This innovation will help to preserve the genetic history of the site and promote woodland growth in addition to the planning obligations of the project. The local protest group changed their name to Havant Thicket for Nature and continues to work closely with Portsmouth Water, providing a valuable perspective on our environmental works and mobilising volunteers to support their implementation.

Figure 8: Saplings being translocated.



Project Delivery

Portsmouth Water has developed a supply chain strategy and security package that protect Portsmouth Water's financial standing as well as assembling a world class project organisation to deliver the Project.

The capability (i.e. structure, functionality, skills and resource plan) of the dedicated project management team mobilised for the Project is exactly as one would expect for a major project, with its capacity appropriately calibrated to the scale of the Project. The Project Director reports directly to the Portsmouth Water CEO and is held to account by the Havant Thicket Reservoir Steering Committee, a formal subcommittee of the Portsmouth Water Board.

Consistent with best practice for major projects, the project management team is a blend of direct hires by Portsmouth Water (the sponsor organisation), contractors and secondees, which together provide the necessary combination of specialist know-how, experience, continuity, and flexibility for strong and effective project management. In this, Portsmouth Water has been supported throughout by the resources of Portsmouth Water's own in-house operational teams, expertise from Portsmouth Water's owner, Ancala, and suitably qualified and experienced consultants, including Atkins, PA Consulting, Arup, Faithful & Gould, Agilia Infrastructure Partners, Sharpe Pritchard, Arcadis, Centrus, Gardiner & Theobald, Binnies, Mott MacDonald and Phoenix Consulting Ltd.

Once the Project has commenced construction, the next phase of Project delivery comprises two main steps:

- Transition from delivery into operations in 2029. This requires Portsmouth Water to establish an operational team to support the water supply commitments to SWS.
- Ongoing support to SWS to deliver the HWTWR Project.

The development of the Project team represents the first step for the sector in developing a new UK market for reservoir Projects. Portsmouth Water continues to support the wider sector and is actively involved in disseminating lessons learned from the Project, for example, by presenting the Project at the Chartered Institute for Water and Environmental Management (CIWEM), and at The British Dam Society Annual General Meeting.

Lessons Learned

The key learning points from the development of the Project are:

- Importance of establishing long-standing relationships with stakeholders and affected communities.
- Adapting to volatility in Construction markets due to causes such as inflationary pressures.
- Effective governance should be in place from the outset of a project.

The development and subsequent delivery phases of the Project have enabled Portsmouth Water to become a more mature organisation capable of managing major infrastructure projects. This provides confidence in Portsmouth Water's capability to deliver major AMP8 programmes such as the Smart Metering programme.

Figure 9: Junction for Northern Access road for the site has been completed to schedule



f. Customer and stakeholder

It has been important to maintain the strong support which was established during the planning application process, ensuring that stakeholders continued to feel informed about the Project and to seek their input towards the development of detailed plans during the construction phase. Key activities have included:

- Maintaining quarterly Community Advisory Group and Strategic Advisory Group meetings, independently chaired and attended by around 70 different statutory bodies and representatives of local interest groups.
- Maintaining six sub-groups to enable more detailed engagement with specific interest groups. Sub-groups included:
 - Economy and Education
 - Recreation
 - Access
 - Environment
 - Pipeline
 - Water recycling
- Continued community involvement through volunteer groups.
- Presentations to local and regulatory interest groups, as well as delivering a learning legacy for the benefit of the water industry and professional institutions.
- As Portsmouth Water plans for transition into operation of the reservoir, customer and stakeholder engagement will continue to be important to ensure that we deliver environmental and social benefits. Our focus will continue to promote volunteering activity, but will move towards:
 - Promotion of recreational aspects of the reservoir, sensitive to nurturing our new wildlife habitats
 - Preparing for community use of the visitor centre, forging links with local community groups
 - Running of the education centre, scheduling visits with local schools and interest groups
 - Evidencing the efficient operation of the reservoir and continued fulfilment of our planning obligations.

Portsmouth Water will also apply the valuable lessons learned from this successful programme of stakeholder engagement to the rest of the business plan, especially to other major projects and programmes such as the smart metering programme.

Figure 10: Portsmouth Water staff at a consultation event



Programme delivery to date

Portsmouth Water is demonstrating with agility and pace that the water industry can deliver major infrastructure projects efficiently, safely and with care for the communities they serve. In the space of just three years, Portsmouth Water has established a client project management team, secured planning permission, awarded the main design and construction contracts, and completed the enabling works needed for construction to start in 2024.

Key milestones achieved:

- October 2020: Submission of planning applications
- January 2021: Bulk supply agreement signed by Portsmouth Water and SWS
- October 2021: Planning Permission
- October 2021: Start of tree removal works
- April 2022: Reservoir enabling works contracts awarded
- May 2022: Evaluation of main works tender responses
- August 2022: Main pipeline contract awarded to Ward & Burke
- December 2022: Trial embankment completed
- December 2022: B2149 highway improvements completed
- January 2023: New regulatory allowance set by Ofwat
- February 2023: Main reservoir contract awarded to Future Water MJJV
- March 2023: £325m investment secured to finance the reservoir project
- July 2023: 80 Hectare rewilding contract signed with the Pig Shed Trust
- September 2023: Northern access route opened for construction traffic

g. Mid period review

Cost Adjustment Mechanism – Background

Ofwat first provided the regulatory allowance for the Havant Thicket Reservoir in 2019, enabling the project to proceed. The PR19 final determination noted the need for a cost adjustment review once the design was progressed, planning permission secured, environmental compensation works agreed, and main contracts awarded. In 2019 it was recognised that there was the risk of change and this was proven to be prudent: first Brexit, then the COVID pandemic and later the war in Ukraine, all served to create inflation and market uncertainty.

Though a considered and collaborative process by Ofwat, Portsmouth Water and Southern Water, a cost adjustment mechanism was completed to:

- Ensure an economic and efficient delivery of the project
- Justify new costs and risks arising from the project development process
- Demonstrate the financial resilience and financeability of Portsmouth Water

To deliver best value for money to customers and avoid an inflated risk position, the final determination of the Cost Adjustment Mechanism included some bespoke arrangements for certain prices which are outside of the control of water companies, including:

- An indexation mechanism that allows for specific construction indices and CPIH, allowing for fluctuations in the price of crucial commodities such as diesel
- A pass-through mechanism for Professional Indemnity insurance

As with PR19, Ofwat recognised in its final determination to the Cost Adjustment Mechanism that a further review would be required later to establish operating costs. This will be dependent on completion of the detailed design by contractors, production of lifecycle asset management plans and on agreeing site management and recreation plans with neighbours Forestry England and Staunton Country Park, and also with the statutory planning authorities.

In January 2023, Ofwat published the final decision document for the cost adjustment mechanism:

[Havant-Thicket-CAM-final-decision-document.pdf](#)

Key decisions

1. Ofwat agreed to increase totex allowances to £310m (2017/18 prices).
2. Professional Indemnity Insurance costs under the main works construction contracts will be a pass-through cost to customers.
3. Totex allowances will be adjusted for changes in steel, concrete and diesel prices over and above those costs priced in the main reservoir contract.
4. Associated risk contingencies with professional indemnity and commodity price risk were removed from the contingency allowance.

Ofwat will amend the allowed totex under the Havant Thicket Price Control at the mid-period review which will take place as part of PR24. Southern Water's customers' bills will therefore not be affected by this decision until 1 April 2025 at the earliest. During this period Portsmouth Water will fund the increased investment. Ofwat will also review taxation allowances and the allowed return for AMP8.

Mid Period Review – PR24 Adjustments to Totex and RCV

The Havant Thicket CAM final decision document outlined the application of totex and RCV adjustments at PR24 in Appendix 1: Application of cost adjustment at PR24 (see figure 11.) Appendix 1 outlines how the totex allowance will be reflected in the 10-year control through a midnight adjustment to the RCV including a 2.92 discount factor to recognise the return on the additional investment in AMP7.

Figure 11: Havant Thicket CAM Final Decision: Appendix 1

Havant Thicket – Cost Adjustment: Final Decision

Appendix 1: Application of cost adjustment at PR24

The table below shows how we propose to apply the cost adjustment at PR24 and calculate the midnight adjustment to the RCV at 31st March 2025. The table is based on allowed totex of £310.0m (2017/18 prices). We have assumed 2.92% for the discount factor which is the wholesale WACC applied to the Havant Thicket Price Control at PR19. The table also assumes all of the allowed totex is included in the RCV (i.e. there is no Pay as You Go (PAYG) expenditure), which is in line with the approach we have set out in our final decision.

Table 4: Calculation of Havant Thicket Price Control RCV midnight adjustment to be applied at PR24

£m (2017/18 CPIH deflated prices)	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	Total
PR19 Totex	10.1	6.1	7.1	17.6	20.4	30.4	22.2	8.2	1.1	0.3	123.6
PR19 PAYG	-	-	-	-	-	-	-	-	0.3	0.3	0.6
PR19 Capex	10.1	6.1	7.1	17.6	20.4	30.4	22.2	8.2	0.8	-	123.0
Ofwat view of allowed totex	11.4	4.8	43.8	74.4	103.6	43.4	12.5	13.0	2.2	0.9	310.0
Difference	1.3	(1.4)	36.7	56.8	83.2	13.0	(9.7)	4.7	1.5	0.9	186.9
Discount factor	2.92%	2.92%	2.92%	2.92%	2.92%						
Number of years discounting	4.5	3.5	2.5	1.5	0.5						
Discounted difference	1.5	(1.5)	39.4	59.3	84.4						
RCV midnight adjustment - applied on 31 March 2025					183.0						

The table below provides an estimated notional RCV for the period 2020–2025 based on our final decision. It can be used by Portsmouth Water to support its regulatory reporting.

Table 5: Calculation of notional Havant Thicket Price Control RCV for 2020–2025

£m (2017/18 CPIH deflated prices)	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
PR19 RCV ²	10.1	16.0	22.9	40.2	60.0
CAM Discounted difference (cumulative)	1.5	(0.0)	39.4	98.7	183.0
CAM RCV - notional RCV reflecting CAM totex	11.5	16.0	62.3	138.8	243.0

Mid Period Review – PR24 Adjustments to taxation

While the mid period review will also consider updates to the Havant Thicket control for changes to taxation, there are no proposed amendments to allowances for taxation. Portsmouth Water expect to report taxable losses for throughout AMP8 as revenue associated with the price control is treated as deferred income under UK GAAP so not recognised for tax purposes.

Mid Period Review – PR24 proposed allowed return

Portsmouth Water have proposed a bespoke cost of capital of 4.13%. Full details can be found in section PR13 Aligning Risk and Return.

Mid Period Review – PR24 allowed revenue

The Havant Thicket control is a zero-revenue control meaning Portsmouth Water customers do not fund the reservoir. The reservoir is funded by Southern Water customers through the bulk supply agreement signed in 2021. The allowed revenue is outlined in the table in figure 12.

Figure 12: Allowed Revenue (Table RR10)

Havant Thicket Winter Storage Reservoir - Calculation of Allowed Revenue								
	Units	DP	2025-26	2026-27	2027-28	2028-29	2029-30	2025-30
Allowed revenue calculation; ADDN1 - Pay as you go	£m	3	0.000	0.000	0.000	0.000	0.000	0.000
Allowed revenue calculation; ADDN1 - RCV run-off	£m	3	4.173	4.663	4.880	4.989	4.956	23.661
Allowed revenue calculation; ADDN1 - Return on capital	£m	3	12.545	13.717	14.132	14.301	14.174	68.868
Allowed revenue calculation; ADDN1 - Revenue adjustments for PR19 reconciliations	£m	3	0.009	0.009	0.009	0.010	0.010	0.047
Allowed revenue calculation; ADDN1 - Quality and ambition assessment (QAA) reward / penalty	£m	3	0.000	0.000	0.000	0.000	0.000	0.000
Allowed revenue calculation; ADDN1 - Tax	£m	3	0.000	0.000	0.000	0.000	0.000	0.000
Allowed revenue calculation; ADDN1 - Grants and contributions (price control)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000
Allowed revenue calculation; ADDN1 - Other income (non-price control)	£m	3	-16.726	-18.389	-19.022	-19.300	-19.140	-92.577
Allowed revenue calculation; ADDN1 - Innovation fund	£m	3	0.000	0.000	0.000	0.000	0.000	0.000
Allowed revenue calculation; ADDN1 - Revenue re-profiling	£m	3	0.000	0.000	0.000	0.000	0.000	0.000
Allowed revenue calculation; ADDN1 - Final allowed revenues	£m	3	0.000	0.000	0.000	0.000	0.000	0.000

4. GOVERNANCE AND ASSURANCE

Production of this supporting document has been undertaken in accordance with internal governance and assurance procedures and processes.

This comprised initial drafting by an internal Lead Author, supported by external consultants (Agilia) as appropriate, 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 before being signed off by the Board:

- i. Executive Owner,
- ii. Nominated Executive,
- iii. Internal Executive Review Team including the CEO and CFO.

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.



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