

# Portsmouth Water WRMP24

## Strategic Environmental Assessment Non-Technical Summary

Portsmouth Water

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# Notice

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## Abbreviations

<b>AONB</b>	Area of Outstanding Beauty
<b>AQMA</b>	Air Quality Management Areas
<b>BNG</b>	Biodiversity Net Gain
<b>CAMS</b>	Catchment Abstraction Management Strategy
<b>CFMP</b>	Catchment Flood Management Plans
<b>CPRE</b>	Campaign for Rural England
<b>CROW</b>	Countryside and Rights Way
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>DCLG</b>	Department for Communities and Local Government
<b>Defra</b>	Department for Environment, Food and Rural Affairs
<b>EAAP</b>	Ecosystems Approach Action Plan
<b>EU</b>	European Union
<b>FRA</b>	Flood Risk Area
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse Gas
<b>GIS</b>	Geographic Information System
<b>HER</b>	Historic Environment Record
<b>HRA</b>	Habitats Regulations Assessment
<b>IMD</b>	Index of Multiple Deprivation
<b>INNS</b>	Invasive Non-Native Species
<b>JNCC</b>	Joint Nature Conservation Committee
<b>km</b>	Kilometres
<b>ktCO<sub>2</sub></b>	Kilo Tonnes of Carbon Dioxide
<b>LNR</b>	Local Nature Reserve
<b>LSOA</b>	Lower Super Output Area
<b>LWS</b>	Local Wildlife Sites
<b>LULUCF</b>	Land Use, Land-use Change, and Forestry
<b>MCZ</b>	Marine Conservation Zone
<b>MPZ</b>	Marine Protection Zone
<b>NCA</b>	National Character Area
<b>NERC</b>	Natural Environment and Rural Communities
<b>NFM</b>	Natural Flood Management
<b>NNR</b>	National Nature Reserve
<b>NO<sub>2</sub></b>	Nitrogen Dioxide
<b>NPPF</b>	National Planning Policy Framework
<b>ONS</b>	Office for National Statistics
<b>PM</b>	Particulate Matter

<b>RAG</b>	Red-Amber-Green
<b>RCP</b>	Representative Concentration Pathway
<b>RBMP</b>	River Basin Management Plan
<b>SAC</b>	Special Areas of Conservation
<b>SEA</b>	Strategic Environmental Assessment
<b>SMP</b>	Shoreline Management Plans
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Sites of Special Scientific Interest
<b>SRO</b>	Strategic Resource Option
<b>SPA</b>	Special Protection Area
<b>UK</b>	United Kingdom
<b>UKCP18</b>	UK Climate Projections 2018
<b>UN</b>	United Nations
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>WFD</b>	Water Framework Directive
<b>WRMP</b>	Water Resource Management Plan
<b>WRZ</b>	Water Resource Zone
<b>WRSE</b>	Water Resource South East

# 1. Introduction

This is the Non-Technical Summary of the Strategic Environmental Assessment (SEA) of Portsmouth Water's Water Resource Management Plan 24 (WRMP24). The purpose of this Non-Technical Summary is to set out the SEA process and the outcomes derived from this and is intended to inform people who have a general interest in the WRMP24, but who are not concerned with its detailed technical assessment. Readers are advised to read the full contents of the SEA Report for more detailed information if required.

While it is the aim that the WRMP24 delivers on its objective of ensuring customers and communities have adequate water supplies available and ensuring that these supplies are resilient to droughts and other future challenges, it is important that this is done in a way which protects the environment and human health. In order to ensure that as great an understanding as possible of the potential effects of the WRMP24 has been made, alongside and informing the SEA, a series of other environmental assessments were undertaken., namely Water Framework Directive (WFD) Assessment, Biodiversity Net Gain (BNG) Assessment, Natural Capital (NC) Assessment and Invasive Non-Native Species (INNS) Assessment.

It is also important to note that as there is a potential that the WRMP24 could lead to a direct or indirect effect on sites which have been designated at the European level for nature conservation purposes (such as Special Areas of Conservation), a Habitats Regulation Assessment (HRA) was also carried out.

## 1.1. The background and need for the WRMP24

It is a regulatory requirement under the Water Industry Act 1991 for water companies to produce a Water Resources Management Plan (WRMP) every five years to help ensure customers and communities have adequate water supplies available.

The Portsmouth Water WRMP24 outlines how the water company has considered the implications of climate change, sustainable abstractions, future population, and housing growth, in addition to other factors that affect long term future uncertainty. The Plan sets out the overall approach and recommended options to reduce any predicted deficits and how to maintain secure supplies to its customers, for the period 2025 to 2075. As it is recognised that the Plan could have implications for the environment beyond the Plan area, it is also couched within a wider regional planning context, which examines water resource planning and associated environmental effects across the south-east of England.

### 1.1.1. Regional Planning

The Portsmouth Water WRMP24 is being produced alongside the Water Resources South East (WRSE) regional resilience Plan which recognises that the south-east of England faces the greatest pressures on public water supplies. It has been estimated that over 1 billion additional litres of water will be required per day by 2050 and nearly 1.7 billion litres per day by 2100<sup>1</sup>.

Via a collaborative approach, Portsmouth Water are working with five other companies under the banner of WRSE to help safeguard continued supplies of water to this part of the country. Alongside Portsmouth Water, the other companies within WRSE are:

- Affinity Water
- SES Water (Sutton & East Surrey)
- Southern Water
- South-East Water
- Thames Water

The WRSE regional resilience plan aims to take a long-term view to water resource planning across the region to 2100 in order to secure a sustainable and resilient water supply. As part of this, the regional plan intends to address issues of a growing population, improve the environment, increase resilience to severe drought and address impacts of climate change.

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<sup>1</sup> WRSE Draft Regional Plan SEA Environmental Report, September 2022. (all WRSE documents can be located in the WRSE library: <https://www.wrse.org.uk/library>)

### 1.1.2. Portsmouth Water's WRMP

There are a number of challenges in developing a WRMP for the Portsmouth area, with implications for both future water supplies and customer demand. While development of the WRMP24 utilised the work undertaken by WRSE as much as possible, further consideration was given to key issues during development of the WRMP24 that included:

- Portsmouth is an area of serious water stress.
- A need to reduce reliance on chalk aquifers.
- An opportunity to contribute to a protected and enhanced environment.
- Uncertainty around population increase and the 'new normal' for water use (relating to the outworkings of COVID-19 and the 'Brexit' process).
- A changing climate.
- Planning for normal conditions as well as dry years, critical peaks and droughts.
- Increase resilience.
- Adaptive planning provides an opportunity to develop a plan able to accommodate uncertainty.

There is considerable uncertainty surrounding many of the above key issues. However, across the South East region, an 'adaptive planning' approach has been taken to develop a Plan that can change as the understanding of these key issues becomes clearer in future. This means that while the Plan identifies immediate investment needs, it can then adapt as the future 'unfolds'. This ensures Portsmouth Water will make the right immediate investment decisions so they can provide resilient water supplies to their customers in the years ahead.

This approach has been rigorous and robust. For example, as part of the development of WRMP24, Portsmouth Water identified 840 different potential futures based upon 6 different population growth scenarios, 28 climate change scenarios and 5 different environmental scenarios. This approach resulted in the following key components of WRMP24:

- Starting in 2026: The 'high plus' basket of demand management measures which aims to reduce leakage by 50 per cent and overall customer demand for water by 15.6 per cent by 2050 compared to 2017-18 levels. This basket of measures includes universal household 'smart' metering over 10 years starting in 2025-26. Existing 'dumb' meters will also be replaced with smart meters starting in 2029-30 over a period of 10 years. By 2035-36 we expect that 94 per cent of the households we serve will have a meter, compared with 37 per cent in 2021-22. Installing 'smart' meters will help reduce leakage inside and outside properties, as well as reducing water demand and improving customer engagement.
- 2030: An upgrade to Source O booster to improve the way we can move water resources around our supply area, freeing up water resources where we need them.
- 2049: Bulk import of potable water from Southern Water to the west of our supply area. This represents a reversal of flow in the existing and planned bulk supplies to Southern Water. Once Southern Water has more water in Hampshire, from other supply developments detailed within the WRSE regional draft plan and Southern Water's WRMP, we would be able to start receiving supplies from Southern Water to support our own supplies in future.
- continued use of existing drought schemes between 2025-26 until 2039-40, in accordance with drought plans:
  - Temporary use bans
  - Non-essential use bans
  - Source S drought permit
- continued provision of existing bulk supply agreements with Southern Water, including the Havant Thicket and Source J baseline options agreed previously in WRMP19. This involves:
- continuing to provide the 15 MI/d SRN Source D transfer in the east beyond 2027, from 2030 continuing to supply both the existing 15 MI/d Source A bulk supply agreement and the further 9MI/d supply resulting from AMP7 Source J enhancements (maximum capacity and utilisation is 24MI/d).

Note that not all Options contained within the WRMP24 have been subject to SEA for a range of reasons such as they are existing bulk supplies, previously approved bulk supplies, are associated with Options in adjacent water companies (and as such considered under the SEA of both WRSE and that water company), or are part of the Havant Thicket Option that has received Planning permission.

The area supplied by Portsmouth Water extends through Hampshire and West Sussex from the River Meon in the West to the River Arun in the East, encompassing 868km<sup>2</sup>. The distribution system includes significant strategic treated water storage spread across a series of large, treated water storage reservoirs and is based around a spine main that runs East to West across the Plan area. This system ensures that all customers in the Portsmouth Water area experience the same level of service and the same overall risk of supply failure.

The company abstracts an average of around 170MI/d and supplies 320,000 properties with clean drinking water from one group of springs, one river and 19 borehole sites under abstraction licences from the Environment Agency via 3,359km of watermains. As such, Portsmouth Water abstracts groundwater found within the Chalk rock of the South Downs to supply public drinking water. Around 85% of the water supply comes directly from groundwater (sourced from boreholes or springs) with the remaining 15% being derived from the River Itchen (itself groundwater fed). The Portsmouth Water supply area is identified in Figure 1-1.

The Portsmouth WRMP24, which will set out how Portsmouth Water will maintain secure supplies to its customers, will run from 2025 to 2075.

**For full technical detail of how the WRMP24 was arrived at, please see both the WRSE regional plan and the Portsmouth Water WRMP24.**

**Figure 1-1 - Portsmouth Water supply area**





## 2. Approach to assessment

In the development of a Water Resource Management Plan, it is critical that a full understanding is made of how much water can be abstracted from the environment in a sustainable way now and in the future. This understanding has been achieved by Portsmouth Water by undertaking a series of robust environmental assessments that align with the approach taken across the region. The environmental assessment process includes six different assessments:

- Strategic Environmental Assessment (SEA);
- Habitats Regulations Assessment (HRA);
- Water Framework Directive (WFD) Assessment;
- Biodiversity Net Gain (BNG) Assessment;
- Natural Capital (NC) Assessment; and
- Invasive Non-Native Species (INNS) Assessment.

As such, Portsmouth Water have conducted an environmental assessment process grounded on using the SEA process as the umbrella process under which the parallel environmental assessments listed above took place as advised in relevant national environmental assessment guidance.

The issues considered in the SEA are those set out under the SEA Regulations, namely of biodiversity, soils, the water environment, air and climate, cultural heritage, and landscape, as well as people-based topics of health and material assets. A bespoke assessment framework, compatible with that developed for WRSE as part of the regional SEA but specific to the Portsmouth area, was developed through a review of relevant plans and policies, as well as local baseline information. This ensured that relevant local issues would be addressed as part of the assessment process and would allow for mitigation to be developed to help reduce any adverse effects identified, or to allow for opportunities for environmental improvement to form part of the WRMP development. The robustness of this local assessment framework was verified through consultation on the SEA Scoping Report with key stakeholders and regulators and comments received formed an important component of refining the assessment process.

As noted, alongside the SEA process and helping to inform it, a series of other environmental assessments have been undertaken and are set out as follows.

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 require all natural water bodies to achieve both Good Chemical Status (GCS) and Good Ecological Status (GES) which, collectively, result in a water body classification of good status. Similarly, River Basin Management Plans (RBMP) outline the actions required to enable natural water bodies to achieve good status. New activities and schemes that affect the water environment and which may be derived from the WRMP may adversely impact biological, hydromorphological, physico-chemical and/or chemical quality elements (WFD quality elements), leading to a deterioration in the baseline water body status. As such, careful consideration of Options within the WRMP has been made to determine effects on waterbodies.

Biodiversity Net Gain (BNG) is an approach that aims to leave the natural environment in a measurably better state than beforehand. Natural England have produced a Biodiversity Metric that provides a way of measuring and accounting for biodiversity losses and gains resulting from development or land management change.

Natural capital is defined in the 25 Year Environment Plan (England) as “the elements of nature that either directly or indirectly provide value to people”. As a new and emerging approach, natural capital incorporates methodologies and approaches (such as ecosystem services) to understand the value that natural assets provide. For the water industry, these can be substantial. The Water Resource Planning Guidelines (WRPG) (England and Wales) states that Water Resource Management Plans (WRMPs) should “use natural capital in decision-making”, “use a proportionate natural capital approach”, “deliver environmental net gain”, and provide cost information on monetised ecosystem service costs and benefits where monetisation is used. WRSE have conducted these BNG and Natural Capital assessments in full, but the findings have been used to inform the Portsmouth WRMP.

An Invasive Non-Native Species (INNS) assessment has also been carried out to determine the threat of spreading INNS throughout the water supply network and specific resource options and assess ways of mitigating this spread. The results of these INNS investigations have formed part of the SEA process for the biodiversity and water objectives. INNS dispersal can occur through a range of recreational and operational

(water company) 'pathways', which may include water or land-based recreation and sports, and water company operations, such as ground maintenance and the operation of raw water transfers (RWTs).

Within the Portsmouth Water area there are a series of areas that are of vital importance to nature conservation such as those ephemeral and perennial chalk streams and rivers. In addition to their global rarity, chalk streams are diverse ecosystems which support a wide range of native wildlife. Their special status (along with other areas of high ecological value) has been recognised in special nature conservation designations being applied to those areas.

As such, in addition to SEA and the specific environmental assessments outlined above, another specialist assessment has been made of the WRMP. Habitats Regulations Assessment (HRA) is required by Regulation 105 of the Conservation (Natural Habitats, and species) Regulations 2017 (as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019), where a land use plan is likely to have a significant effect on such sites designated for nature conservation and is not directly connected with or necessary to the management of that site.

Such sites include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). HRA is also required, as a matter of UK Government policy, for potential SPAs (pSPA), possible SACs (pSAC) and listed and proposed wetlands of international importance (Ramsar sites and proposed Ramsar sites) and sites identified, or required, as compensatory measures for adverse effects on habitats sites, pSPA, pSAC and listed or proposed Ramsar sites, for the purposes of considering plans and projects which may affect them. In short, an HRA determines whether there will be any 'likely significant effects' on any of these designated sites because of the implementation of the WRMP (either on its own or 'in combination' with other plans or projects) and, if so, whether these effects will result in any adverse effects on the site's integrity.

### 3. The SEA Framework

Following good practice, a number of bespoke SEA objectives have been developed for the WRMP24 and are set out in a SEA Framework. These SEA objectives reflect the environmental sustainability objectives the WRMP24 should be aiming to achieve and the areas that the WRMP24 is expected to impact upon or have an influence on. The expectation is that even though some objectives may not be within the WRMP's direct remit, the WRMP24 should be able to influence the direction of change through setting out clear approaches which could inform the work of Portsmouth Water's partners and other stakeholders.

The SEA Framework consists of 13 objectives and associated decision-making / assessment aid questions and has been developed through the analysis of baseline information and identification of key environmental sustainability issues and opportunities, as well as the review of relevant plans, policies and legislation.

In order to assess how each aspect of the WRMP24 performs against each of the SEA objectives, a series of decision-making criteria / assessment aid questions have also been developed. The decision-making criteria are a way of guiding the assessment.

**Table 3-1 - SEA Objectives and decision aid questions for WRMP24**

SEA Topic	SEA objective	Decision aid questions
Biodiversity	To protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity and achieve biodiversity net gain	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Protect and enhance the conservation status of designated sites and their qualifying features (SPAs, SACs, Ramsar sites, MCZs, SSSIs, National Nature Reserves and Ancient Woodland)?</li> <li>• Ensure HRA compliance with regards to international sites? (taken from HRA results)</li> <li>• Affect direct or indirectly a priority habitat on the priority habitat inventory?</li> <li>• Protect and enhance priority habitats and species, including surface and ground water-dependent habitats and species?</li> <li>• Affect the marine environment, habitats and species (including MCZs and MPAs)?</li> <li>• Contribute to the loss or gain in habitat connectivity at local, regional and national scale?</li> <li>• Create or restore habitat delivering a 10% net gain for biodiversity? (taken from BNG assessment results)</li> <li>• Avoid the possibility for INNS to be spread/ introduced?</li> <li>• Create an opportunity to improve biodiversity value through removal of INNS?</li> <li>• (taken from the INNS assessment results)</li> </ul>
Soil	To protect and enhance the functionality, quantity and quality of soils	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Affect high grade agricultural land?</li> <li>• Promote the efficient use of land?</li> <li>• Prevent soil erosion and retain soil stocks as a natural resource?</li> <li>• Involve use of brownfield or greenfield land?</li> <li>• Prevent mineral sterilisation?</li> <li>• Result in soil contamination or involve soil remediation?</li> <li>• Affect SSSIs of geological importance?</li> </ul>

SEA Topic	SEA objective	Decision aid questions
Water	To protect and enhance the quantity and quality of surface, groundwater, estuarine and coastal waterbodies and water dependent habitats	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Affect surface water quality or quantity?</li> <li>• Affect groundwater quality or quantity?</li> <li>• Affect estuarine or coastal water quality or quantity?</li> <li>• Affect bathing waters?</li> <li>• Affect shellfish water protected areas?</li> <li>• Affect chalk rivers?</li> <li>• Reduce the flashy nature of surface waters?</li> <li>• Slow the flow in upper catchments and reduce soil losses to river systems?</li> <li>• Support achievement of environmental objectives set out in River Basin Management Plans and Shoreline Management Plans</li> <li>• Protect and enhance the environmental resilience of the water environment to climate change?</li> <li>• Contribute to the achievement of WFD objectives (taken from the WFD assessment results)?</li> </ul>
Air	To reduce and minimise air and noise emissions	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Minimise air emissions (pollutants and noise) that affect human health and biodiversity?</li> <li>• Affect an existing air quality management area (AQMA) or lead to the creation of a new one?</li> <li>• Promote enhancements to green infrastructure networks to help improve air quality?</li> </ul>
Greenhouse Gas Emissions	To achieve Portsmouth Water target of reducing carbon emissions to Net Zero by 2030 and contribute to national target of Net Zero by 2050	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Reduce direct and indirect emissions of all greenhouse gases, including carbon dioxide, during construction, operation and decommissioning of schemes?</li> <li>• Maximise supply of energy from low carbon/renewable energy sources / use of low carbon/renewable energy?</li> <li>• Maximise opportunities for making use of waste heat?</li> <li>• Use negative carbon emissions technologies to offset residual emissions such Nature Based Solutions?</li> </ul>

SEA Topic	SEA objective	Decision aid questions
Climate Factors	To reduce vulnerability of built infrastructure to climate change risks and hazards	<ul style="list-style-type: none"> <li>• Create new carbon sinks/removals through natural sequestration including that provided by green infrastructure and soils which contribute to carbon sequestration?</li> </ul> <p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Avoid development in areas likely to be affected by flooding or where this is not possible ensure that flooding can be managed throughout the lifetime of the infrastructure?</li> <li>• Avoid development in areas likely to be affected by coastal erosion or where this is not possible ensure that coastal change can be managed throughout the lifetime of the infrastructure?</li> <li>• Avoid development which would cause or exacerbate climate related issues such as freshwater and coastal squeeze?</li> <li>• Manage the risks associated to periods of limited water availability during droughts over the lifetime of the infrastructure?</li> <li>• Manage the risks associated with heatwaves and wildfires over the lifetime of the infrastructure?</li> <li>• Manage the risks of flooding and coastal erosion, particularly through working with nature-based solutions?</li> </ul>
	To reduce or manage flood risk, taking climate change into account	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Avoid development in flood risk areas (whether existing or future) when possible?</li> <li>• Lead to infrastructure development that is flood resilient over its lifetime, considering the effects of climate change, without increasing the flood risk elsewhere and identifying opportunities to reduce the risk overall?</li> </ul>
Landscape	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Protect and enhance designated landscapes and features?</li> <li>• Affect the character of the landscape, townscape or seascape, including tranquility and views?</li> <li>• Protect conservation areas or historic landscape/townscape areas?</li> <li>• Minimise noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views?</li> <li>• Improve access to the countryside?</li> <li>• Create or improve green infrastructure which contributes to access to the landscape?</li> </ul>

SEA Topic	SEA objective	Decision aid questions
Cultural Heritage	To conserve, protect and enhance the historic environment and assets, including archaeology	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Protect designated historic assets, sites and features?</li> <li>• Protect heritage assets at risk?</li> <li>• Protect historic assets and their settings?</li> <li>• Protect important archaeology (including unknown archaeology)?</li> <li>• Alter the hydrological conditions of water-dependent heritage assets, including organic remains?</li> </ul>
Population and Human Health	To maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Allow for green economic development?</li> <li>• Provide employment opportunities and economic diversity?</li> <li>• Minimise disturbance from noise, light, visual, and transport due to construction and operational activities?</li> <li>• Minimise disturbance to active travel (pedestrian and cycle routes, Public Rights of Way) during construction and operational activities?</li> <li>• Secure resilient water supplies for the health and wellbeing of customers?</li> </ul>
	To maintain and enhance tourism and recreation	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Affect terrestrial, freshwater or marine water resources that are used for tourism and recreation?</li> <li>• Maintain or enhance tourism in the region through the creation or improvement of terrestrial or water-based attractions?</li> <li>• Improve access to the natural environment for recreation, including those living within deprived areas?</li> <li>• Provide education or information resources for the public about the natural environment?</li> </ul>
Material Assets	To minimise resource use and waste production	<p>Will WRMP24:</p> <ul style="list-style-type: none"> <li>• Minimise the use of materials, energy and resources?</li> <li>• Promote water efficiency and encourage a reduction in water consumption?</li> <li>• Minimise the production of waste?</li> <li>• Promote sustainable waste management practices in line with the waste hierarchy?</li> <li>• Encourage the use of recycled and / or secondary materials?</li> </ul>

SEA Topic	SEA objective	Decision aid questions
		<ul style="list-style-type: none"> <li>• Promote the use of low carbon materials and technologies?</li> <li>• Promote the use of local suppliers that use sustainably-sourced and locally produced materials?</li> </ul>
	To avoid negative effects on built assets / infrastructure	Will WRMP24: <ul style="list-style-type: none"> <li>• Reuse existing infrastructure?</li> <li>• Affect major built assets and infrastructure, including transport infrastructure?</li> </ul>



## 4. Technical Environmental Assessment

The SEA Objectives have been formulated to incorporate the findings of the various technical environmental assessments, specifically the Habitats Regulations Assessment, Water Framework Directive Assessment, Biodiversity Net Gain and Natural Capital assessments. This has helped to provide an integrated environmental assessment of the plan.

It is however important to note, that whilst the results of the various technical environmental assessments have been used to inform the SEA, care has been taken to align the approaches to ensure there is no risk of double counting where overlaps between some of the SEA objectives and various metrics used in the technical assessments may have occurred (introducing undue bias).

### Habitat Regulation Assessment

Habitat Regulation Assessment (HRA) is required by Regulation 63 of the Conservation (Natural Habitats, and Species) Regulations 2017 (as amended). The HRA of the WRMP24 comprises Stage 1 Screening and Stage 2 Appropriate Assessment (AA). It was undertaken following a methodology based on the extent and nature of the WRMP24 as a 'plan' and taking a precautionary approach.

The assessment provides a summary of the WRSE screening results for the two options considered, undertakes a Stage 1 Screening review and, dependent on the findings, takes forward to Stage 2 Appropriate Assessment those European Sites which could not be screened out, either alone or in-combination.

The two options assessed were Source S Drought Permit and Source O Booster. The Stage 1 Screening review ruled out Likely Significant Effects on European Sites, both alone and in-combination for Source S Drought Permit. However, Source O Booster was shown to have potential Likely Significant Effects on Solent Maritime Special Area of Conservation (SAC), Chichester and Langstone Harbours Special Protection Area (SPA) and Chichester and Langstone Harbours Ramsar site (wetland of international importance) due to hydrological connectivity and potential for water quality impacts both alone and in-combination.

At AA the Source O Booster option was assessed in light of the conservation objectives for each European Site. In making the assessment of whether an option (construction/ operation/ both) may have adverse effects on the integrity of a European site, potential avoidance and mitigation measures were considered. In the absence of detailed project-specific information, a high-level assessment of the potential for the Source O Booster option to have an adverse effect on the integrity of European Sites was undertaken at Stage 2 AA. A total of three European Sites within or adjacent to the Plan Area were included in the assessment and the potential for impacts arising from development as a result of the option was determined.

It is considered reasonable to anticipate from the information available that the Source O Booster option could be delivered in a manner which avoids any adverse effects on the integrity of the European Sites. This is through a combination of sensitively designing, programming and constructing options and through the use of standard mitigation techniques. The potential pathway relating to water quality is one that can be resolved through standard mitigation measures. However, this must be confirmed based on project design. HRA will therefore be required at project stage to fully assess all potential impacts upon European sites once the option design has been finalised and the construction programme is known.

Taking into account the requirements and controls set out above, it can reasonably be concluded that the inclusion of the Source O Booster option in WRMP24 will not have an adverse effect on the integrity of the European sites either alone or in-combination.

### Water Framework Directive

The WFD TN available as Appendix G presents the findings of the Water Framework Directive (WFD) assessment that has been undertaken as part of the environmental assessment process to support the development of the WRSE Emerging Regional Plan.

The WFD assessments have been undertaken by WRSE and results considered in the undertaking of the SEA of Portsmouth Water's WRMP24. The Level 1 WFD assessments have been reviewed and updated for the WRMP24 Schemes. The Level 2 assessment has been undertaken only on those supply options selected before 2050 by the WRSE Best Value Plan (BVP), Best Environmental and Societal Plan (BESP) or the Least Cost Plan (LCP) and is based on the All Companies Working Group methodology for each of the Schemes.

The pre-2050 Portsmouth Water option selected in the WRSE BVP, BESP and LCP is listed as follows:

- Source S Drought Permit



In summary, the L2 assessment for this drought permit option concludes that there is Medium risk for the temporary increased abstraction from the Chichester Chalk to be WFD non-compliant and, therefore, further assessment is required to ensure that the additional abstraction does not negatively impact under the quantitative GWDTE, dependent surface water body and water balance tests.

## Biodiversity Net Gain

Biodiversity Net Gain (BNG) is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. Biodiversity metrics provide a way of measuring and accounting for biodiversity losses and gains resulting from development and/or land management change.

A BNG assessment forms an integral part of the Strategic Environmental Assessment and the inclusion of BNG as part of the WRMP24 environmental assessment process is supported by the updated Water Resources Planning Guideline Supplementary Guidance 'Environmental Society in Decision Making' (November 2021).

BNG assessments for the two emerging Portsmouth Water options were screened out as they will not result in a change in land use.

## Natural Capital

Natural capital assessments (NCA) are required in order to evaluate the impact of the proposed Portsmouth Water (PW) options on the natural environment through an assessment of the impact of the Option on the natural capital stocks and subsequent ecosystem services these stocks provide.

This was undertaken by Water Resources South East's (WRSE) in accordance with the WPRG SG. A condition under this is that only supply-side options are within scope of a NCA, of which there are four options for PW.

All four supply side options were either scoped out of a natural capital assessment by WRSE, included in the baseline scenario for Portsmouth Water, or allocated as options to other water companies (due to being a transfer between two water companies). This means that there are no numerical outputs of the NCAs of PW options due to no expected future impacts, or the costs and benefits were allocated to other water companies.

This analysis contributes to the wider dWRMP objectives of PW through highlighting that the proposed options are not expected to materially harm the natural capital stocks of the region.

## Invasive Non-Native Species

This INNS risk assessment (the risk of INNS being introduced and spread through the functioning of each scheme via transfer pathways that may become active once the scheme is operational) has been undertaken through a Level 1 screening assessment only. The Level 1 screening assessment is used to determine whether any schemes are considered high-enough risk to warrant a Level 2 risk assessment using the Environment Agency's standardised risk assessment tool.

Water Resources South East's (WRSE) high-level screening methodology was used for this assessment which accounts for frequency in which transfers would be operational and the severity of their impact, as inferred by the nature and volume of water being transferred. These criteria formed a screening matrix for assessment, in which only schemes scoring 'low', 'medium' or 'high' are taken forward for a Level 2 assessment.

The Level 1 WRSE screening outcome (considering the general scheme type only) for the two schemes concluded that neither required a further Level 2 risk assessment, as all were considered to have 'very low' INNS transfer risk. As such, no further review of these high-level screening outcomes was undertaken.

## 5. Assessment of alternatives

Water resource planning is complicated and there is a lot of uncertainty, largely as it is an exercise in understanding the current water supply system that reflects past decision making processes, against future scenarios that are influenced by aspects such as climate change, population growth, changes in technology and economic outcomes. At all times, there is a need to ensure that the company can achieve a secure supply of water for the period 2025 - 2075. Where a risk of deficits in supply are identified, a series of 'demand side' (measures that reduce demand for water) and 'supply side' (measures that increase supply) Options are considered and incorporated into modelling, with the goal of identifying a preferred set of Options to meet the requirements and objectives of the Plan.

Traditionally, plans were developed to meet deficits at the least cost. Whilst this is still an important criterion, there are other factors which are considered. It was the aim of Portsmouth Water to develop a plan that represents 'best value'. A best value plan is defined as one that considers factors alongside economic cost and seeks to achieve an outcome that increases the overall benefit to customers, the wider environment and overall society. WRSE were tasked with developing the decision-making approach and tool (the investment model) that would be used by all companies in WRSE to select their preferred plan.

In addition to developing the BVP, and as required by the revised Water Resources Planning Guidelines (WRPG), further optimisation runs were also automatically shortlisted by WRSE, to benchmark and appraise the BVP against. All alternatives were constrained to securing a wholesome supply of water to customers and other sectors (multi-sector plan) over the planning period. WRSE developed two reasonable alternatives for each water company:

- **Least Cost Plan:** The model was run in adaptive mode, solving all the future branches and design drought conditions simultaneously, but optimising to minimise cost only (i.e., no other objectives are optimised). The outputs from various runs of the least cost plan helped to identify the options that are selected most frequently, and the potential tipping points along the adaptive pathways. This helped to inform decision-making around best value.
- **Best Environmental and Societal Plan:** This programme is not optimised on cost, but the programme that Portsmouth Water consider delivers best overall environment and society value outcomes. This takes into account overall performance across the SEA, Natural Capital and Biodiversity Net Gain metrics, and through engagement with stakeholders.

Through the process of adaptive planning and considering strategic alternatives to the BVP, Portsmouth Water considered the modelling outputs of all nine adaptive planning pathways, and the two strategic alternatives to consider both what plans would look like if it was optimised on Least Cost, or on producing the best environmental and social metrics.

Comparing outputs for all nine adaptive pathways for the BVP, Portsmouth Water considered that the draft Preferred Plan is resilient and largely unchanged across the variety of Strategic alternatives considered.

**Please see the WRSE SEA Report<sup>2</sup> for full discussion of this process and environmental findings made.**

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<sup>2</sup> WRSE Draft Regional SEA Environmental Report, September 2022

## 6. Assessment of Options within WRMP24

In order to meet the requirements of WRMP24 to ensure Portsmouth Water customers and communities have continued adequate amounts of clean drinking water supplies available, a series of Options for enabling supplies have been identified and included within the Plan.

It is normal practice when developing a Plan to propose different ways (options) of fulfilling its objectives. In respect of the WRMP24, a series of Options were set out which can be implemented in a phased approach to address identified water supply requirements. The range of Options identified (along with the yield and year they are anticipated to be in service) are as follows:

### Supply Side Options

**Table 6-1 - Supply Side Options in WRMP24**

Option	Year in Service	Brief description
Upgrade Source O Booster	2030	Upgrade to pumping station to remove a 'bottleneck' in the supply network and improve movement of water through the system, to allow 'freeing up' of water resources where they are needed.
Drought Permit: Source S	2026	Under normal conditions, Portsmouth Water's Source S source typically outputs between 1 MI/d and 2.5 MI/d and is constrained by the daily and annual average licensed rate of 2.5 MI/d. Portsmouth Water is proposing the inclusion of a drought permit within its Drought Management Plan (DMP) to increase the licensed daily abstraction limit at Source S by 8.5 MI/d to 11 MI/d for about 6 months; to ensure necessary operational flexibility the individual annual and QRST Group licensed quantities may also need to be varied
Potable Resource for SRN Source A to Source A	2049	Reversal of flow in the existing and planned bulk supplies to Southern Water (i.e. once Southern Water has more water in Hampshire, bulk supplies from Portsmouth Water to Southern Water will end and instead supplies from Southern Water will be received to Portsmouth Water)
Import: PWC at SRN Source D extension	2027	This is an extension to an existing bulk supply (Portsmouth Water to Southern Water).
Import: PWC Source A to SRN Reservoir	2030	Part of Havant Thicket Option (21 MI/d) (Portsmouth Water to Southern Water).
Works A increased treatment capacity	2030	Part of Havant Thicket Option
Havant Thicket Winter Storage Reservoir	2030	Havant Thicket Winter Storage Reservoir is a significant construction project being developed in collaboration between Portsmouth Water and Southern Water. It will provide resilient water supplies to the region, supporting reduced abstraction on chalk rivers. The project has an overall biodiversity net gain and will offer a new community leisure facility for the area.
Import: PWC Source A Extension	2030	This is an extension to an existing bulk supply (24 MI/d) (Portsmouth Water to Southern Water).
Conjunctive Benefit of SRN Works A to Havant Thicket	2031	This Option is related to the Southern Water effluent reuse scheme
Recycling: Recharge of Havant Thicket reservoir from SRN Works A and new WRP	2031	This Option is the Southern Water effluent reuse scheme

While all of the above Options are noted in the WRMP24 Best Value Plan, only those relating to Upgrade to Source O Booster and Source S Drought Permit are detailed in this SEA. The reason for this is that the other Options noted are either existing bulk supplies, approved bulk supplies, associate Options with adjacent water companies or are part of the Havant Thicket Option which has already received planning permission. All of these Options have been treated as part of the Baseline to the WRMP24.

### Demand Side Options

**Table 6-2 - Demand Side Options in WRMP24**

Option	Year	Brief Description
Company Demand: Gov-led B Hybrid	2027	Involves the water efficient labelling that has already been announced by DEFRA, the potential for minimum standards in water using goods, plus enhanced support on new developments that could be introduced in the future to support national targets.  Of note, water efficient labelling systems (WELS) were identified in the Water UK 'Pathways to Long-Term PCC Reduction' report as the most significant and cost beneficial approach to demand management.
Demand Basket High Plus Company	2026	The demand option increases each year. By 2049/50 the cumulative saving is expected to be 39.14 Ml/d for both annual average and critical period planning conditions.
Non-essential use bans	2026	Between the start of the plan in 2025–26 until 2039–40  These options are no longer needed when the level of resilience that is planned for in the WRMP improves from a 1 in 200 to a 1 in 500 year drought event.
Temporary use bans	2026	As above

Each Option has been assessed against the SEA Framework in respect of construction and operation phases and considering positive and negative effects separately.

To allow for the identification of different levels of effects when assessing the WRMP24 proposals, a scoring system has been used to differentiate in terms of magnitude and significance of effects. This scoring system is widely used in SEA and is based around the following scale (colour aligned with WRSE scale) to reflect the assessment aid questions in the SEA Framework.

**Table 6-3 - Assessment Scoring Scale**

Assessment Scale	Assessment Category	Significance of Effect
+++	Major beneficial	Significant
++	Moderate beneficial	
+	Slight beneficial	
0	Neutral or no obvious effect	Not Significant
-	Slight adverse	
--	Moderate adverse	
---	Major adverse	Significant

This scoring system seeks to capture both the nature and the scale of predicted effects arising from the Options set out in the WRMP24. Alongside the overall summary rating (colour and symbol), the assessment tables attempt to identify the nature of the effects of the WRMP24 on the SEA objectives according to the level of detail required by the SEA Directive.

It is to be noted that the scores derived will be considered 'in the round' in light of the assessment aid questions (detailed in the SEA Framework) and a judgement made as to an appropriate summary score for that aspect of the WRMP24 being considered. The commentary provided explains the rationale behind the score. Any

recommendations are noted, as are references to appropriate additional mitigation that is proposed to maximise beneficial effects and/or minimise/avoid any potential adverse effects identified.

This scoring system seeks to capture both the nature and the scale of predicted effects arising from the Options set out in the WRMP24. Alongside the overall summary rating (colour and symbol), the assessment tables attempt to identify the nature of the effects of the WRMP24 on the SEA objectives according to the level of detail required by the SEA Directive. This includes commentary on the effects, magnitude, scale, duration, permanence and certainty as shown in Table 5-4.

**Table 6-4 - Characteristics of effect**

<b>Magnitude (size of effect)</b>	<b>Scale (implications of effect)</b>	<b>Duration (length of time over which effect will be present)</b>	<b>Permanence (lasting of effect)</b>	<b>Certainty (that effect will occur)</b>
Large (L)	Local (L)	Long term (LT)	Temporary (T)	High (H)
Medium (M)	Regional (R)	Medium term (MT)	Permanent (P)	Medium (M)
Small (S)	National (N)	Short term (ST)		Low (L)
	Global (G)			

## 6.1. Overview of assessment results

The following tables provide an overview of the assessment 'scores' for all of the Options considered within the SEA, for both the construction and operation phases (post mitigation).

**Table 6-5 - Construction Scores (Post Mitigation)**

Option Name	Plan Featured	Biodiversity		Soil		Water		Air Quality		Greenhouse Gas Emissions		Climate Factors			Landscape		Cultural Heritage		Population and human health			Material Assets					
		To protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity and achieve biodiversity net gain	To protect and enhance the functionality, quantity and quality of soils	To protect and enhance the quantity and quality of surface, groundwater, estuarine, coastal waterbodies and water dependent habitats	To reduce and minimise air and noise emissions	To achieve Portsmouth Water target of reducing carbon emissions to Net Zero by 2030 and contribute to national target of Net Zero by 2050	To reduce vulnerability of built infrastructure to climate change risks and hazards	To reduce or manage flood risk, taking climate change into account	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	To conserve, protect and enhance the historic environment and assets, including archaeology	To maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	To maintain and enhance tourism and recreation	To minimise resource use and waste production	To avoid negative effects on built assets / infrastructure													
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Source O Booster	BVP, BESP, LCP	0	-	0	0	0	0	0	-	0	-	0	0	0	0	-	0	0	0	0	0	0	0	-	0	-	
Source S drought permit	BVP, BESP, LCP	N/A	N/A	N/A	N/A	N/A	N / A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N / A	N / A
Company Demand: Gov-led B Hybrid	BVP, BESP, LCP	N/A	N/A	N/A	N/A	N/A	N / A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N / A	N / A	
Demand Basket High Plus Company	BVP, BESP, LCP	0	-	0	0	0	-	0	-	0	-	0	-	0	0	-	0	-	0	-	0	0	0	-	0	-	
NEUBS	BVP, BESP, LCP	N/A	N/A	N/A	N/A	N/A	N / A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N / A	N / A	
TUBS	BVP, BESP, LCP	N/A	N/A	N/A	N/A	N/A	N / A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N / A	N / A	

**Table 6-6 - Operation Scores (Post Mitigation)**

Option Name	Plan Featured	Biodiversity		Soil		Water		Air Quality		Greenhouse Gas Emissions		Climate Factors			Landscape		Cultural Heritage		Population and human health			Material Assets					
		To protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity and achieve biodiversity net gain	To protect and enhance the functionality, quantity and quality of soils	To protect and enhance the quantity and quality of surface, groundwater, estuarine, coastal waterbodies and water dependent habitats	To reduce and minimise air and noise emissions	To achieve Portsmouth Water target of reducing carbon emissions to Net Zero by 2030 and contribute to national target of Net Zero by 2050	To reduce vulnerability of built infrastructure to climate change risks and hazards	To reduce or manage flood risk, taking climate change into account	To conserve, protect and enhance landscape, townscape and seascape character and visual amenity	To conserve, protect and enhance the historic environment and assets, including archaeology	To maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing	To maintain and enhance tourism and recreation	To minimise resource use and waste production	To avoid negative effects on built assets / infrastructure													
		+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Source O Booster	BVP, BESP, LCP	0	0	0	0	+	-	0	-	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	+	0	
Source S drought permit	BVP, BESP, LCP	0	-	0	0	+	-	+	-	+	-	++	-	0	0	0	0	0	0	++	0	0	0	++	0	+	0
Company Demand: Gov-led B Hybrid	BVP, BESP, LCP	+	0	0	0	++	0	+	0	+	0	+	0	0	0	0	0	0	+	0	0	0	+	0	0	0	
Demand Basket High Plus Company	BVP, BESP, LCP	++	0	0	0	+++	0	+	0	+	0	+	0	+	0	0	0	0	+	0	0	0	0	0	+	0	
NEUBS	BVP, BESP, LCP	+	-	0	-	+	0	+	0	+	0	+	0	0	0	-	0	0	0	-	0	-	+	0	0	-	
TUBS	BVP, BESP, LCP	+	-	0	-	+	0	+	0	+	0	+	0	0	0	-	0	0	0	-	0	-	+	0	0	-	



Assessment of the Options outlined considered both construction effects and those which are anticipated to occur during operation of the Option. A series of mitigation measures were also identified, with the aim of reducing or nullifying any adverse effects, while potentially maximising any beneficial effects from the Option.

For the most part, it is anticipated that the Options within WRMP24 will not require any construction activities and effects were only identified in relation to Source O Booster and the 'Demand Basket High Plus' Options. None of the identified effects noted in relation to the implementation of these Options were considered significant.

In respect of Source O Booster, slight adverse effects are anticipated during construction in respect of Objective 1 due to potential effects on groundwater having an adverse effect on designated sites. Slight adverse effects are also anticipated from construction on air and noise emissions (Objective 4), carbon emissions (Objective 5), visual amenity (Objective 8) as the Option is located in the South Downs National Park, resource use and built assets (Objectives 12 and 13) due to the requirement for materials and potential effects on the transport network.

In relation to the implementation of the 'Demand Basket High Plus' Option, slight adverse effects identified include on Biodiversity (Objective 1), where there may be minor effects such as disturbance or small areas of habitat loss during repair works. Similar slight adverse effects could be expected through the activities associated with repair works on water quality (Objective 3), air, noise and carbon emissions (Objective 4 and 5), built infrastructure (Objective 6), landscape and visual amenity (Objective 8), the historic environment (Objective 9), health and wellbeing due to disturbance causing effects on wellbeing (stress) induced by repair works (Objective 10). Repair works will also lead to the use of resources and increase waste (Objective 12), while there may be effects on built infrastructure (Objective 13) such as road surfacing.

Such construction adverse effects of both these Options are anticipated to be local scale, short term and temporary to the construction / repair phase.

During operation, effects have been identified for all Options, though only in relation to the Source O Booster and Source S have significant adverse effects been identified – in all other instances, significant effects are considered beneficial.

Operation of Source O Booster and Source S are considered to have moderate adverse effects in respect of water quality and quantity, particularly due to additional abstraction potentially impacting on nearby Chalk rivers and the Chichester Chalk groundwater body.

In terms of significant beneficial effects, demand management Options provide greatest potential. This is mainly due to the clear rationale of these measures leading to a reduced need for water abstraction and treatment, leading to keeping more water in the environment and reducing pressures on water sources, as well as a reduced need for infrastructure development. Major beneficial effects are anticipated from the 'Demand Basket High Plus' Option in this regard. It is also considered that these measures would have beneficial effects in terms of biodiversity, again from keeping water in the environment and reducing pressure on sources.

Reducing demand for water will also result in beneficial effects in relation to the need for pumping and treatment, which will help reduce air, noise and carbon emissions, maintaining public health and wellbeing, reducing the requirement for resource use and helping to avoid adverse effects on built assets. On the whole though, these effects while welcome, are not considered to be significant.

Conversely, slight adverse effects were also identified. Typical examples can be seen through those identified in relation to 'Non-Essential Use Bans' where anticipated slight adverse effects include in relation to Biodiversity (Objective 1), the restrictions on watering plants and using hosepipes may have minor adverse effects on pollinators, insects, fish (domestic ponds) and birds (bird baths) where gardens are found to support such biodiversity. There could also be effects on soils (Objective 2) through dust generation and erosion e.g. in gardens or other such open spaces. Lack of ability to water open spaces, or operate ornamental fountains etc. could impact visual amenity and landscapes (Objective 8). Non-essential use ban is likely to have minor negative effects on the community and social well-being (Objective 10) as there will be restrictions on irrigation of gardens and allotments and use of water for recreational purposes. There may also be a small increased risk of fires in allotments as vegetation dries out. Risk to human health and wellbeing may also be increased where dust suppression measures cannot be implemented and cleaning of paths and other infrastructure restricted. This may increase health and safety risks. Assuming commercial properties including gardens are exempt from bans and restrictions there is likely to be only a minor effect on tourism and recreation (Objective 11). Non-commercial tourism sites may be affected. In addition, while temporary, the Option is likely to impact on the maintenance of buildings and industrial plant (Objective 13).

It is considered that all slight adverse effects will be short term and temporary and confined to the local scale.

It is important to recognise that the Demand Management Options will apply across the whole of the Portsmouth area and are anticipated to have cumulative beneficial effects from reducing the demand for water. For example, while Demand Management Options such as NEUBs and TUBs would typically be implemented in a phased, sequential manner, it is the intention that such measures will act to reduce pressure on water resources by reducing demand for water and as such, reduce the need for abstraction, treatment and onward pumping. This will act cumulatively across the Plan area and into nearby / linked resource areas. Savings in water would likely have cumulative beneficial effects in respect of resilience to biodiversity (Obj. 1), the water environment (Obj. 3), reducing carbon, air and noise emissions (Obj. 4 and Obj. 5), climate change (Obj. 6), maintaining health and wellbeing (Obj. 10), as well as minimising resource use (Obj. 12). While some of the savings made are anticipated in themselves small and benefits would be slight, it is to be noted that cumulatively effects could be significant and of importance given that these will be implemented in a drought situation when the environment is naturally under stress. Other Demand Management measures would apply at all times and act cumulatively to continually reduce pressure on sources, with consequent permanent benefits for people and the environment.

## 7. Mitigation

The term mitigation encompasses any approach that is aimed at preventing, reducing or offsetting any significant adverse environmental effects that have been identified. In practice, a range of measures applying one or more of these approaches is likely to be considered in mitigating any significant adverse effects predicted as a result of implementing the WRMP24. In addition, it is also important to consider measures aimed at enhancing positive effects. All such measures are generally referred to as mitigation measures.

However, the emphasis should be in the first instance on proactive avoidance of adverse effects. Only once alternative options or approaches to avoiding an effect have been examined, should mitigation then examine ways of reducing the scale / importance of the effect.

Mitigation can take a wide range of forms, including:

- Refining Intervention measures in order to improve the likelihood of positive effects and to minimise adverse effects;
- Technical measures (such as setting guidelines) to be applied during the implementation phase;
- Identifying issues to be addressed in project assessment, such as Environmental Impact Assessment and the development of Environmental Management Plans for certain projects or types of project;
- Proposals for changing other plans and programmes; and
- Contingency arrangements for dealing with possible adverse effects.

A number of mitigation approaches have been used throughout the development of the Water Resource Management Plan, in order to mitigate potential effects (significant or otherwise). Of note is that within a number of Options, 'embedded mitigation' has been considered. 'Embedded mitigation' is mitigation that has been incorporated into the development of the Option and is set out for each Option. Through the SEA process, further 'additional mitigation' has also been identified and this is also set out in in the SEA report (Section 10). 'Additional mitigation' is mitigation that is required to address specific issues relating to significant effects in addition to 'embedded mitigation' and identified through the SEA process.

## 8. Cumulative, synergistic and indirect effects

As noted in the SEA Directive, there is a requirement to consider secondary, cumulative and synergistic effects of implementation of the WRMP24. Secondary effects are effects that are not a direct result of the WRMP24, but which occur away from the original effect or as the result of a complex pathway. Cumulative effects arise where several proposals or elements individually may or may not have significant effect but in-combination have a significant effect due to spatial crowding or temporal overlap. Synergistic effects are when two or more effects act together to create an effect greater than the simple sum of the effects when acting alone



## 8.1. Likely cumulative effects

WRMP24 options which have the potential for cumulative effects have been identified (as required by the SEA Regulations) from the analysis of plans and programmes, the baseline data, consultation responses and an examination of the identified key issues and cumulative, synergistic and indirect effects have also been considered during the SEA.

## 8.2. In-plan cumulative effects

The results of the direct effects of the WRMP options are discussed in Chapters 9 and 10 of the SEA Report. It is considered that the options can interact cumulatively across environmental issues either through construction or operation.

In respect of the WFD Assessment, the cumulative assessment looks at whether the individual options that make up the regional plan could have in-combination effects that would affect the WFD objectives of a waterbody, noting that while an individual option may not affect WFD status on its own, when combined with another option or group of options, there could be an in-combination effect.

Of the pre-2050 PW options selected by the BVP, only two water supply options are selected (Source S Drought Permit and the Upgrade to Source O Booster to 25MI/d. The assessment finds that the only water body potentially impacted by both pre-2050 BVP water supply options is the GB40701G505200 Chichester Chalk groundwater body. The Upgrade Source O Booster to 25MI/d option was screened out during Level 1 assessment as its activities are considered to present a low risk of WFD impact, even in combination with any other options. However, the Level 2 assessment of the Drought Permit: Source S option concluded individually that there was a WFD Medium impact risk of deterioration or of not achieving target objectives and these risks remain. This is the only risk that remains under a pre-2050 BVP selected option cumulative assessment.

With regards to the HRA, in-plan cumulative effects were not identified owing to the screening out of the Source S Drought Permit option which left the Source O Booster option as the only supply option progressing to appropriate assessment.

### 8.2.1. Construction In-plan cumulative effects

There are 10 supply options that feature in Portsmouth Waters BVP however many of these are already in operation and represent extensions to existing baseline conditions. It is anticipated that construction or repair / refurbishment works are limited to just two of the options in the BVP, the Upgrade to 'Source O Boosters' (to 25MI/d) and the 'Demand Basket High Plus'.

However, while the location of the Source O Boosters is known, it is not possible to know at this stage precisely where measures taken under the 'Demand Basket High Plus' will take place. These could include works such as leakage reduction on trunk mains or at reservoirs. However, such activities and their consequent effects are anticipated to be small scale and will be localised to specific areas (reservoirs or trunk mains). It is also anticipated that in general such works would be undertaken at a wide spatial scale (i.e. at various locations across the Portsmouth area) and likely to be undertaken on a rolling programme, with little or no overlap in terms of location and undertaken at different times. Similarly, it is anticipated that the works to the Source O Boosters will be very localised (a key element being replacement of existing pumps). As such it is anticipated that there will be no cumulative effects in relation to construction.

### 8.2.2. Operational In-plan cumulative effects

Many of the supply side options that feature in the BVP represent existing options that are reflected in the baseline conditions and therefore unlikely to give rise to cumulative effects.

It is anticipated that the Demand Management Options noted in WRMP24 will apply across the whole of the Portsmouth area and are anticipated to have cumulative beneficial effects from reducing the demand for water. For example, while Demand Management Options such as NEUBs and TUBs would typically be implemented in a phased, sequential manner, it is the intention that such measures will act to reduce pressure on water resources by reducing demand for water and as such, reduce the need for abstraction, treatment and onward pumping. This will act cumulatively across the Plan area and into nearby / linked resource areas. Savings in water would likely have cumulative beneficial effects in respect of resilience to biodiversity (Obj. 1), the water environment (Obj. 3), reducing carbon, air and noise emissions (Obj. 4 and Obj. 5), climate change (Obj. 6), maintaining health and wellbeing (Obj. 10), as well as minimising resource use (Obj. 12). While some of the savings made are anticipated in themselves small and benefits would be slight, it is to be noted that

cumulatively effects could be significant. Other Demand Management measures would apply at all times and act cumulatively to continually reduce pressure on sources, with consequent permanent benefits for people and the environment.

### 8.3. In-combination cumulative effects with other plans and projects

The SEA has also considered other plans and projects that might lead to cumulative effects when combined with the WRMP. WRSE have undertaken a cumulative effects assessment for the programme of WRMP options selected before 2050 and post 2050 for each of its constituent water companies. Those options have been identified from the WRSE investment model within Situation 4 for each of the BVP, LCP and BESP.

The WRSE assessment considered the options identified in the three plans of each water company that were selected by 2050 are within 500m of the water company boundaries. Where an environmental receptor such as a designated site falls within the 500m buffer region, any options impacting these designated sites (even if the option is over 500m from the company boundary) were considered within the assessment. Options that do not have defined geographical locations such as temporary use bans (TUBS), non-essential use bans (NEUBS), catchment management options, media campaigns and demand management options are also considered within the WRSE cumulative effects assessment.

In respect of Portsmouth Water supply options, WRSE have identified the following options that were included in the WRSE cumulative assessment:

- Drought Permit: Source S
- Recharge of Havant Thicket reservoir from SRN Works A and new WRP

In respect of the Source S Drought Permit, moderate adverse effects are attributed. WRSEs in-combination effects assessment identified a potential risk of WFD deterioration to the GB40701G505200: Chichester Chalk groundwater body as a result of the simultaneous operation of Drought option: North Arundel Drought Permit/Order (2025 onwards) and Source S Drought Permit. The assessment suggested that in the event of a drought event where both emergency drought groundwater options were operational, an in-combination effect would occur which could lead to temporary reduction in groundwater levels, leading to potential changes in the water balance and surface water dependant status elements.

There are a large number of other plans relating to the Portsmouth Water area. These include spatial plans which will set out how development in local areas will take place, such as the draft Portsmouth Local Plan (2021) and the Portsmouth City Local Plan (2006), East Hampshire Adopted Local Plan / Joint Core Strategy (2014), Gosport Borough Local Plan 2038 and Action Plans such as Somerstown and North Southsea Area Action Plan (2012). There are also plans which are to address particular environmental or social issues such as the South East River Basin District – River Basin Management Plan (December 2015), or the Joint Strategic Flood Risk Assessment (Partnership for Urban South Hampshire) which is currently under review and the Portsmouth surface water management plan. All such Plans have been considered as part of the SEA, for example to help identify baseline.

Within the above noted plans (as well as those not listed here), there are measures set out which could result in construction activities (of potentially significant scale), or operational plans. However, as noted above, it is anticipated that construction activities related to Options within WRMP24 will be small scale and of localised effect. A range of mitigation measures have been noted within this SEA which would act to reduce effects, many of which could be included in construction Environmental Management Plans – these would be further developed through detailed scheme design and would reflect conditions and context prevailing at that time. In addition, it is to be expected that all major infrastructure such as that which may arise from other Plans, will be developed within the appropriate Planning framework and will itself be subject to measures to ensure cumulative effects are addressed. As such, no significant cumulative effects are anticipated in respect of other plans in relation to any of the SEA Objectives at this stage.

A key element of the wider Portsmouth Water approach to water management is the development of the Havant Thicket reservoir. Clearly this project will require significant construction activities, but it is anticipated that there will be no construction cumulative effects for the reasons outlined above (the Options within WRMP24 being relatively small scale in construction / refurbishment terms, the mitigation measures identified and the expectation of the reservoir being developed within a strictly controlled construction and planning framework).

It is considered that there will be no cumulative effects between the Demand Management Options within WRMP24 and the Havant Thicket development, other than these will increase the availability of water from the reservoir (by reducing demand across the water resource zone).

In respect of HRA, it is considered feasible for the options selected within WRMP24 to have no adverse effects on the integrity of European sites in-combination with other plans and projects provided they are sensitively designed and mitigation adequately addresses all potential impacts alone and in-combination. However, a detailed in-combination assessment cannot be undertaken until the project stage. This is due to the potential for effects to be avoided or designed out and for temporal scope of impacts alone and in-combination to be more accurately assessed.

Project-level HRA will be required for all of the options taken through to AA and should take on board the high-level in-combination assessment presented here.

## 9. Monitoring

The SEA Regulations state that the responsible authority ‘*shall monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action*’. In addition, the Environmental Report should provide information on a ‘*description of the measures envisaged concerning monitoring*’.

In line with the SEA Regulations, monitoring will cover significant environmental effects and it will involve measuring indicators that will allow identification of links between the implementation of the WRMP24 and the likely significant effects (both positive and negative) being monitored. The SEA Regulations make clear that it is not necessary to monitor everything, or to monitor an effect indefinitely, rather monitoring should focus on those identified significant environmental effects. Guidance states that it is inappropriate to monitor everything, and monitoring proposals should be focused on the following areas:

- Identify potential breaches of international, national, or local legislation, recognised guidelines, or standards.
- Actions which may give rise to irreversible damage, with a view to identifying trends before such damage occurs.
- Where there was any uncertainty in the SEA and where monitoring would enable prevention or mitigation measures to be taken.

In short, it is the intention that the results of the monitoring will be of particular benefit to those involved with the further iterations of the WRMP24 (which will be of particular importance to help further consideration of this Adaptive Plan) and if required, will allow early remediation to be undertaken of any identified adverse effects.

It should be noted that many of the effects identified that would arise from implementation of the Options contained within the WRMP24 will be experienced during construction of infrastructure only and will not be experienced during operation of these facilities. In these circumstances monitoring will be restricted to the construction phase only.

It is also to be noted that as options are brought forward for development, further specific monitoring requirements may be incorporated in detailed designs and plans accompanying scheme development (including, where applicable, formal applications for any required environmental permits or abstraction licences, planning permission, as well as any scheme-specific HRA and WFD assessments). These will be discussed with relevant regulatory and statutory bodies and stakeholders to agree the appropriate scale and duration of such scheme-specific monitoring activities proportionate to the assessed environmental risks.

It is also the case that a number of Options within the WRMP24 are continuations or expansions of existing operational practice and are subject to existing regulatory requirements. No additional monitoring is therefore envisaged over that already being carried out by Portsmouth Water in relation to those Options. At present Portsmouth Water undertake water quality monitoring data from a series of boreholes, in order to demonstrate compliance with water quality standards. In addition, monitoring is undertaken in respect of groundwater levels and river flows, along with some general environmental monitoring in certain catchments. Use is also made of a range of monitoring carried out by stakeholder organisations such as Environmental Agency and adjacent water companies such as Southern Water. It is anticipated that this monitoring will continue.

## 10. Summary and Conclusions

The SEA and other assessments carried out throughout the development of WRMP24 has been thorough and comprehensive. Assessment was made of an initial long list of sites and environmental issues were considered through all stages of short listing and Option development. This was at both a regional level (carried out by WRSE) and at a more 'local' level that considered issues in light of the environmental context of the Portsmouth area. Consideration of both the regional and local level has meant that two SEA teams have been involved and have acted independently of each other, though liaison has been maintained and results of assessments shared. These teams have also liaised closely with the Portsmouth WRMP making team and have challenged the Plan development team when appropriate.

Based on the findings of the SEA, it is possible to recognise a number of key considerations and draw conclusions with regards to the WRMP24 and its 'environmental performance'. These are outlined as follows.

In the first instance, it is important to recognise that while WRMP24 clearly fits within a regional context, it also needs to reflect the issues and opportunities of the Portsmouth area. Similarly, there are a range of challenges and uncertainties facing both the region and the Plan area. Notably these include climate change and the need for increased climate resilience, water stress, population growth, along with economic uncertainties. Of particular note within the Portsmouth area is that there is a need to reduce reliance on chalk aquifers and this has been a key consideration within the development of the WRMP24 and a significant driver of proposed new Options and investment required. The approach to assessment made, of considering wider regional issues (by WRSE), as well as considering a 'local' Portsmouth baseline and review of relevant plans and policies to develop a bespoke SEA Framework has resulted in an enhanced understanding of environmental issues in the Plan area and the surrounding region and this has allowed full and robust consideration of Options proposed under WRMP24.

The Adaptive plan approach that has been developed, recognises the inherent uncertainties involved in water resource planning and has been specifically designed to help water companies adopt a forward-looking approach to allow companies to plan for schemes that may be required from 2025 and beyond. The essence of this approach is that the Plan can adapt depending on which of the potential future scenarios identified occurs.

Consideration of WRSE of the adaptive planning approach identified the following three plans:

- Best Value Plan – Investment model pareto runs for Best Value Plan metrics (Customer Preference, SEA+, SEA-, Natural Capital, Carbon, Resilience (reliability, adaptability, evolvability), intergenerational equity), this is optimised on both individual Best Value Plan and cost metrics
- Least Cost Plan – Investment model run result when optimising on cost only
- Best Environmental and Societal plan - Removes the resilience metrics from the Best Value Plan

Examination was made of the trade-offs between the anticipated additional value that different portfolios of options could provide against the least cost criterion to try to derive something that is best value – for the environment, society and Portsmouth Water customers. The WRMP24 has taken the adaptive planning approach and having identified the three Plan types, further identified what is considered the most realistic scenario, alongside the most realistic future pathway and from this has outlined a series of supply options (i.e. those which in general will increase the amount of water in the supply system), alongside a series of demand options (i.e. those which will act to reduce the need for water). Having identified the Options in the Best Value Plan, WRSE carried out initial assessment of these for SEA and the associated environmental assessments of Habitats Regulations Assessment, Water Framework Directive, Biodiversity Net Gain, Natural Capital Assessment and Invasive Non-Native Species. These assessments were further built upon by Portsmouth Water, with a particular emphasis on trying to identify issues of note in a local context.

The Options identified in the Best Value Plan included both 'demand side' Options (measures that reduce demand for water) and 'supply side' Options (measures that increase supply). It is important to note that there were a series of Options that are also included but which were not subject to SEA for a range of reasons such as they are existing bulk supplies, previously approved bulk supplies, are associated with Options in adjacent water companies (and as such considered under the SEA of both WRSE and that water company), or are part of the Havant Thicket Option that has received Planning permission.

Assessment of the Options outlined considered both construction effects and those which are anticipated to occur during operation of the Option. A series of mitigation measures were also identified, with the aim of reducing or nullifying any adverse effects, while potentially maximising any beneficial effects from the Option.

For the most part, it is anticipated that the Options within WRMP24 will not require any construction activities and effects were only identified in relation to Source O Booster and the 'Demand Basket High Plus' Options.



None of the identified effects noted in relation to the implementation of these Options were considered significant.

In respect of Source O Booster, slight adverse effects are anticipated during construction in respect of Objective 1 due to potential effects on groundwater having an adverse effect on designated sites. Slight adverse effects are also anticipated from construction on air and noise emissions (Objective 4), carbon emissions (Objective 5), visual amenity (Objective 8) as the Option is located in the South Downs National Park, resource use and built assets (Objectives 12 and 13) due to the requirement for materials and potential effects on the transport network.

In relation to the implementation of the 'Demand Basket High Plus' Option, slight adverse effects identified include on Biodiversity (Objective 1), where there may be minor effects such as disturbance or small areas of habitat loss during repair works. Similar slight adverse effects could be expected through the activities associated with repair works on water quality (Objective 3), air, noise and carbon emissions (Objective 4 and 5), built infrastructure (Objective 6), landscape and visual amenity (Objective 8), the historic environment (Objective 9), health and wellbeing due to disturbance causing effects on wellbeing (stress) induced by repair works (Objective 10). Repair works will also lead to the use of resources and increase waste (Objective 12), while there may be effects on built infrastructure (Objective 13) such as road surfacing.

Such construction adverse effects of both these Options are anticipated to be local scale, short term and temporary to the construction / repair phase.

During operation, effects have been identified for all Options, though only in relation to the Source O Booster and Source S have significant adverse effects been identified – in all other instances, significant effects are considered beneficial.

Operation of Source O Booster and Source S are considered to have moderate adverse effects in respect of water quality and quantity, particularly due to additional abstraction potentially impacting on nearby Chalk rivers and the Chichester Chalk groundwater body. Source S is also anticipated to have moderate adverse impacts in terms of biodiversity due to the likely impacts on designated sites.

In terms of significant beneficial effects, demand management Options provide greatest potential. This is mainly due to the clear rationale of these measures leading to a reduced need for water abstraction and treatment, leading to keeping more water in the environment and reducing pressures on water sources, as well as a reduced need for infrastructure development. Major beneficial effects are anticipated from the 'Demand Basket High Plus' Option in this regard. It is also considered that these measures would have beneficial effects in terms of biodiversity, again from keeping water in the environment and reducing pressure on sources.

Reducing demand for water will also result in beneficial effects in relation to the need for pumping and treatment, which will help reduce air, noise and carbon emissions, maintaining public health and wellbeing, reducing the requirement for resource use and helping to avoid adverse effects on built assets. On the whole though, these effects while welcome, are not considered to be significant.

Conversely, slight adverse effects were also identified. Typical examples can be seen through those identified in relation to 'Non-Essential Use Bans' where anticipated slight adverse effects include in relation to Biodiversity (Objective 1), the restrictions on watering plants and using hosepipes may have minor adverse effects on pollinators, insects, fish (domestic ponds) and birds (bird baths) where gardens are found to support such biodiversity. There could also be effects on soils (Objective 2) through dust generation and erosion e.g. in gardens or other such open spaces. Lack of ability to water open spaces, or operate ornamental fountains etc. could impact visual amenity and landscapes (Objective 8). Non-essential use ban is likely to have minor negative effects on the community and social well-being (Objective 10) as there will be restrictions on irrigation of gardens and allotments and use of water for recreational purposes. There may also be a small increased risk of fires in allotments as vegetation dries out. Risk to human health and wellbeing may also be increased where dust suppression measures cannot be implemented and cleaning of paths and other infrastructure restricted. This may increase health and safety risks. Assuming commercial properties including gardens are exempt from bans and restrictions there is likely to be only a minor effect on tourism and recreation (Objective 11). Non-commercial tourism sites may be affected. In addition, while temporary, the Option is likely to impact on the maintenance of buildings and industrial plant (Objective 13).

It is considered that all slight adverse effects will be short term and temporary and confined to the local scale.

It is important to recognise that the Demand Management Options will apply across the whole of the Portsmouth area and are anticipated to have cumulative beneficial effects from reducing the demand for water. For example, while Demand Management Options such as NEUBs and TUBs would typically be implemented in a phased, sequential manner, it is the intention that such measures will act to reduce pressure on water resources by reducing demand for water and as such, reduce the need for abstraction, treatment and onward

pumping. This will act cumulatively across the Plan area and into nearby / linked resource areas. Savings in water would likely have cumulative beneficial effects in respect of resilience to biodiversity (Obj. 1), the water environment (Obj. 3), reducing carbon, air and noise emissions (Obj. 4 and Obj. 5), climate change (Obj. 6), maintaining health and wellbeing (Obj. 10), as well as minimising resource use (Obj. 12). While some of the savings made are anticipated in themselves small and benefits would be slight, it is to be noted that cumulatively effects could be significant and of importance given that these will be implemented in a drought situation when the environment is naturally under stress. Other Demand Management measures would apply at all times and act cumulatively to continually reduce pressure on sources, with consequent permanent benefits for people and the environment.

Another important element within WRMP24 that will have ongoing beneficial effects is the Havant Thicket Reservoir and associated elements. As this Option has been granted planning permission it has not been specifically considered in this SEA, but it is worth noting here as its presence allows for this WRMP24 to concentrate on measures such as Demand Management, with consequent benefits for the environment. The development of the Havant Thicket reservoir itself is anticipated to secure more reliable water supplies for the South East region. Portsmouth Water anticipate that by using the reservoir to supply their own customers, they can then share supplies from other water sources with Southern Water. This will mean Southern Water will be able to reduce the amount of water that they take from the Chalk Rivers Test and Itchen in Hampshire, which as noted in WRMP24, are rare and sensitive chalk streams and are considered of particular value.

It is recognised that WRMP24 will not act or be delivered in isolation and will influence and be influenced by, other Plans and Policies or developments across and beyond the Portsmouth Water area and the south east as a whole. While there is a potential for cumulative effects during construction, it is anticipated that for the most part construction works associated with the WRMP are anticipated to be relatively small scale, with localised effects and for the most part likely to be spatially and temporally isolated from major infrastructure developments. A range of mitigation measures have been noted within this SEA which would act to reduce effects, many of which could be included in construction Environmental Management Plans – these would be further developed through detailed scheme design and would reflect conditions and context prevailing at that time. In addition, it is to be expected that all major infrastructure such as that which may arise from other (non-water sector) Plans, will be developed within the appropriate Planning framework and will itself be subject to measures to ensure cumulative effects are addressed.

Nevertheless, there is a potential that individual options could act cumulatively with Options within other water company areas to produce adverse effects and WRSE have identified that in the event of a drought event where emergency drought groundwater options were operational, an in-combination effect would occur which could lead to temporary reduction in groundwater levels, leading to potential changes in the water balance and surface water dependant status elements. Similarly, WRSE identified that the Recharge of Havant Thicket reservoir from SRN Works A, cumulative adverse effects, including significant adverse effects, have been identified across a range of objectives owing to its proximity to adjacent Southern Water options.

While many aspects of WRMP24 are anticipated to result in beneficial effects, it is important that Portsmouth Water understand the effect of implementation of WRMP24, particularly in regard to those areas where significant adverse effects could occur. Portsmouth Water already undertake water quality monitoring data from a series of boreholes, in order to demonstrate DWI compliance. In addition, monitoring is undertaken in respect of groundwater levels and river flows, along with some general environmental monitoring in certain catchments. Use is also made of a range of monitoring carried out by stakeholder organisations such as Environmental Agency and adjacent water companies such as Southern Water. It is anticipated that this monitoring will continue. In addition, a series of monitoring measures have been noted through this SEA that could be incorporated into Environmental Management Plans for both the construction and operation phases of Option, or which could be applied across Portsmouth Water to help understand how implementing WRMP24 will interact with the Objectives of the SEA. This would allow early identification of unforeseen adverse effects, as well as crucially build up an evidence base to inform consideration of future iterations of this adaptive plan.

**In conclusion, Portsmouth Water have developed a Water Resource Management Plan (WRMP24) which has been subject to a set of thorough and comprehensive environmental assessments, at both a regional level and at a level local to the Portsmouth Water area. The assessments undertaken have been consistent in approach and resulted in iterative development of the Plan, thereby allowing the Plan to be developed in the context of a thorough understanding of the key environmental issues and constraints of the Portsmouth Water area and beyond. This allowed for a robust consideration of alternatives to the Plan and allowed identification of a Preferred set of Options. The range and significance of anticipated effects to be anticipated from implementation of the WRMP24, including both beneficial and adverse, have been identified and mitigation proposed where required. An emphasis on Demand Management will help to ensure that water can remain in the environment, unless**

**absolutely needed. Monitoring will help to protect the environment by allowing action from unexpected effects to be taken and will help inform future iterations of the Plan. Overall, it is considered that WRMP24 represents a well balanced approach, in terms of environmental performance, to providing water to the Portsmouth area.**

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