

Portsmouth Water



FINAL WATER RESOURCES MANAGEMENT PLAN 2024

SEA POST ADOPTION STATEMENT

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AtkinsRéalis



SEA Post Adoption Statement

Portsmouth Water

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PORTSMOUTH WATER FINAL WRMP24

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1. Introduction

1.1 Background to the Plan

Portsmouth Water was established in 1857 and is one of 21 regulated water supply companies in England and Wales. Portsmouth Water supplies an area of 868km² with a population of over 740,000 in nearly 320,000 properties across West Sussex and Hampshire. Under sections 37A to 37D of the Water Industry Act 1991, water companies are required to produce a Water Resources Management Plan (WRMP) every five years to help ensure their customers and communities have adequate water supplies available. Portsmouth Water's WRMP provides details on how the company will provide a safe, reliable water supply for its customers, whilst also protecting the environment, effectively improving the resilience of water supplies to droughts and other future challenges. This WRMP covers the next 50-year period from 2025-26 to 2074-75, known as WRMP24.

Portsmouth Water's WRMP24 means that the company will become more resilient to increasingly severe drought events, at the same time as reducing their reliance and impact upon the precious chalk-based environment that characterises their supply area. The Plan sets out the overall approach and recommended options to reduce any predicted deficits and how to maintain secure supplies to its customers. 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.

WRMP24 was produced alongside the Water Resources South East (WRSE) regional resilience Plan. When combined, the regional plans meet the national need in a dynamic yet flexible way. This more 'joined up' approach marked a step-change in water resource planning, giving a complete picture of the nation's water resources for the first time.

Of all the regions, the south east faces the greatest pressures on public water supplies and is designated an area of 'serious water stress' by the Environment Agency. This means that current or future household demand for water is a high proportion of the effective rainfall available which is or is likely to be available to meet that demand. Water companies in the south east currently supply six billion litres of water each day. It has been estimated that over 1.5 billion additional litres of water will be required per day by 2050 and nearly 2.7 billion litres per day by 2075¹.

Via a collaborative approach, Portsmouth Water worked with five other companies under the banner of WRSE to deliver the National Framework for water resources and 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;
- South East Water;
- Southern Water; and
- Thames Water.

By aligning with the south east regional multi-sector resilience plan for water resources, Portsmouth Water's WRMP24 balances national, regional, and local interests – reflecting the best value for their customers as well as

¹ WRSE Revised Draft Regional Plan, August 2023



the best value regional plan and the investment and environmental ambitions of the regulators, customers and stakeholders. Portsmouth Waters WRMP24 is their most ambitious and collaborative plan yet.

This plan demonstrates Portsmouth Water's commitment to deliver their vision '*Excellence in Water. Always*' by delivering on the following four principles:

- To secure sustainable water supplies for their customers, which protect and enhance the environment in a changing world.
- To be at the frontier of delivering high-quality, resilient, net-zero services for their customers, for the environment and for the region.
- To co-create solutions which deliver their customers', communities' and stakeholders' priorities.
- To always provide affordable water for all.

Understanding there is considerable uncertainty to planning many years in advance, the regional planning process has been specifically designed to help water companies adopt a forward-looking approach to uncertain requirements through adaptive planning. This allowed Portsmouth Water to plan for schemes that may be required from 2025 and beyond.

In order to do this, WRSE developed a 'root and branch' adaptive tree as the base for forecast for its regional plan investment modelling. This included the most likely set of future challenges and uncertainties facing the south east region over the next 50 years. This required examination of nine different pathways with different combinations of population growth, climate change impacts and levels of environmental ambition. The regional plan identifies the immediate investment needed in all the future pathways. It can then adapt depending on which future occurs. This ensures water companies, including Portsmouth Water, will make the right immediate investment decisions so they can provide resilient water supplies to their customers in the years ahead.

A 50-year planning horizon has been selected to ensure that any large strategic schemes required beyond 2050 are identified. These large strategic schemes can require a significant lead in time and therefore assessment beyond 2050 can help to identify potential future investment needs for Portsmouth Water. Planning 50 years ahead also allows Portsmouth Water, and the region as a whole, to reduce and/or mitigate the environmental effects of the options required.

Due to the various options contained in the WRMP24, as detailed in section 9 and 11 of the SEA Environmental Report, and their potential for these to have significant effects on the environment, an SEA was undertaken in line with the Environmental Assessment of Plans and Programmes Regulations 2004 (the 'SEA Regulations').

Under the umbrella of the SEA, seven other environmental assessments have helped inform and integrate with the SEA²; namely Habitats Regulations Assessment (HRA), Water Framework Directive (WFD) Assessment, Biodiversity Net Gain (BNG) Assessment, Natural Capital (NC) Assessment, Invasive Non-Native Species (INNS) Assessment, Sites of Special Scientific Interest Assessment (SSSI Assessment) and Heritage Impact Assessment (HIA). Please refer to Appendix F – K of the SEA Environmental Report and the HRA which was published as a standalone report.

² Assessments were completed in line with methodology produced by WRSE aligning with guidance produced by the Environment Agency. WRSE, November 2022 [wrse_file_1347_wrse-regional-plan-environmental-assessment-methodology-guidance.pdf](#)



1.2 Post Adoption Statement

Part 4 (Post Adoption Procedures) of the SEA Regulations requires that information on the WRMP24, as well as how the SEA has been taken into account, should be published. The purpose of the Post Adoption Statement is to describe:

- How environmental considerations have been integrated into the WRMP24 (**chapter 2**);
- How the SEA Environmental Report has been taken into account in preparation of the WRMP24 (**chapter 2**);
- How the opinions expressed in the consultation on Scoping Report and the SEA Environmental Report have been taken into account (**chapter 3**);
- The reasons for choosing WRMP24 as adopted, in the light of other reasonable alternatives considered (**chapter 4**); and
- The measures that are to be taken to monitor the significant environmental effects of the implementation of the WRMP24 (**chapter 5**).

This Post Adoption Statement is the last of a series of documents that have been produced as part of the SEA process, the first being the Scoping Report which was consulted upon from 14th March to 18th April 2022. The responses received were reviewed and used to update the SEA Framework and associated decision-making questions / assessment criteria of the specific options contained within WRMP24.

Subsequently, SEA Environmental Reports, or evidence to support the SEA Environmental Report, were developed and consulted upon at the following stages:

- Portsmouth Water's draft WRMP24 (dWRMP24)³ and draft SEA Environmental Report⁴, was published on their website on 15th November 2022. The statutory consultation ran for a 14-week period, closing on 20th February 2023.
- Portsmouth Water's revised draft plan (rdWRMP24)⁵, Statement of Response (SoR) and revised draft SEA Environmental Report⁶ were issued to Defra (who consult directly with Environment Agency, Natural England and Ofwat, amongst others⁷) for review to ensure they adequately reflected and took account of the representations and feedback received during the public consultation on the dWRMP24 and draft SEA. The reports were issued to Defra on 31st August 2023. Defra's response was received 5th February 2024, requesting further information to inform the Secretary of States decision on the next steps for Portsmouth Water's plan.
- A revised SoR, providing additional information to Defra, including details on required updates to the SEA, was issued to Defra on 15th April 2024.
- Defra's permission to publish their Final WRMP24 (fWRMP24), which included requirements for final amendments to the SEA, was received 21st August 2024.

For full details of processes involved and findings, this Post Adoption Statement for the fWRMP24 should be read in conjunction with the above documents, as well as the fWRMP24.

³ <https://www.portsmouthwater.co.uk/news/publications/water-resources-planning/>

⁴ <https://www.portsmouthwater.co.uk/wp-content/uploads/2022/11/Portsmouth-Water-dWRMP-SEA-Report-v3.1.pdf>

⁵ [Water Resources Planning | Portsmouth Water](#)

⁶ [Appendix-1D-Portsmouth-Water-rdWRMP24-SEA.pdf \(portsmouthwater.co.uk\)](#)

⁷ The Environment Agency and Natural England are statutory consultee for WRMPs. At the statement of response stage, their role changes and they become technical advisors to Defra and the Secretary of State.



1.3 Compliance with SEA Regulations

As set out in Chapter 4 of the SEA Environmental Report, the main stages of SEA involve:

- **Stage A** - Setting the context and objectives, establishing the baseline and deciding on scope - this stage has been addressed via the Scoping Report, with consultation on this taking place with the relevant statutory consultation bodies between 14th March to 18th April 2022.
- **Stage B** - Developing and refining options and assessing effects - this stage is described within the SEA Environmental Report, particularly Chapters 8 - 14 as follows:
 - Chapter 8: Technical Environmental Assessment
 - Chapter 9: Existing Abstractions
 - Chapter 10: Assessment of Alternatives
 - Chapter 11: Assessment of WRMP24 Options
 - Chapter 12: Mitigation
 - Chapter 13: Cumulative, Synergistic and Indirect Effects
- **Stage C** – Preparing the SEA Environmental Report
- **Stage D** - Consultation on the plan and the SEA Environmental Report - following approval by Defra, Portsmouth Water published their draft WRMP24 (dWRMP24), and associated SEA Environmental Report and Habitat Regulation Assessment, on 15th November 2022. The statutory consultation ran for a 14-week period, closing on 20th February 2023. On 31st August 2023, Portsmouth Water submitted their revised draft WRMP24 (rdWRMP24) to Defra alongside their response to feedback received during the draft regional plan consultation (SoR) and revised SEA Environmental Report to ensure it adequately reflected and took account of the representations and feedback received during the public consultation on the dWRMP24. Defra's response was received 5th February 2024. Finally, a revised SoR, providing additional information to Defra, including details on required updates to the SEA, was issued to Defra on 15th April 2024.
- **Stage E** - Monitoring the significant effects of implementing the plan – this would be fulfilled through implementation of a monitoring plan informed by Chapter 14 of the SEA Environmental Report.

Details of how the SEA complies with the SEA Regulations are set out in section 3.8 and Table 3-1 of the SEA Environmental Report, which is updated with further clarification and repeated as Table 1-1 below for convenience. Note that this table is based upon The Environmental Assessment of Plans and Programmes Regulations 2004 – Schedule 2 'Information for Environmental Reports'.

Table 1-1 - Table 1-1 Compliance with SEA Regulations

Information to be included in the Environmental Report under the SEA Regulations (Regulation 12 and Schedule 2)	Where covered in the SEA Environmental Report
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is:	
a) An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	Chapters 1, Chapter 5 and Appendix B
b) The relevant aspects of the current state of the environment and the likely evolution without implementation of the plan or programme	Chapter 6 and Appendix C and D.
c) The environmental characteristics of areas likely to be significantly affected	Chapter 6 and Appendix C and D.



d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC and 92/43/EEC	Chapter 6 and Appendix C and D.
e) The environmental protection objectives established at international, community or national level which are relevant to the programme and the way those objectives and any environmental considerations have been taken into account during its preparation	Chapter 5 and Appendix B
f) The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues such as: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage including architectural and archaeological heritage; landscape; the interrelationship between the above factors.	Chapter 11 and Appendix E.
g) The measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the plan.	Chapter 12 and Appendix E.
h) An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter 10 – see also WRSE Regional Plan SEA Environmental Report.
i) A description of measures envisaged concerning monitoring (in accordance with Regulation 17)	Chapter 14.
j) A non-technical summary of the information provided under the above headings	Non-technical summary.



2. Integration of environmental considerations in WRMP24

2.1 How the SEA Environmental Report has been taken into account in preparation of the WRMP24

Previous Water Resource Management Plans were derived by considering costs that included the economic cost of delivering and operating a scheme, plus a carbon cost.

As noted in Section 1.1, Portsmouth Water's WRMP24, along with five other water companies WRMPs in the south east, were produced alongside the Water Resources South East (WRSE) regional resilience Plan, in order to give a complete picture of the nation's water resources for the first time. The regional plan, and thereby water company plans, was derived by considering a wider set of criteria, that builds on a cost-efficient plan, ensuring that it delivers regulatory and government policy, whilst also protecting and enhancing the environment.

Detail on how the SEA informed both the regional and Portsmouth Water's company plan has been set out below.

Regional Planning

The WRSE regional plan is a 'best value plan' that delivers wider benefits to society. It considers a range of factors alongside economic cost in the identification of the preferred water resource programme. The development of a best value plan was promoted by the Environment Agency, Ofwat and Natural Resources Wales in the Water Resources Planning Guideline. WRSE were required to ensure the regional plan met several legal and regulatory requirements and policy expectations at the most efficient cost possible; however, through engagement with customers and stakeholders, the WRSE group identified a range of areas where it could go further. This means that the water resource programme that forms the basis of the WRSE regional plan might not be lowest cost, but it will deliver additional value in the areas that matter most to the people of the region. The Water Resources Planning Guideline (WRPG)⁸ sets out the requirements for companies to follow in producing their WRMPs. The supporting Environment Agency National Framework⁹ gives details of the indicative scale of challenge facing future water resource provision in England and requires water companies to work together in regional groups to meet the challenge and develop a cohesive set of water resource plans. A best value plan therefore builds from a cost-efficient plan but ensures it delivers regulatory and government policies.

WRSE developed the best value plan objectives, criteria, and metrics through a consultation process in 2021, before the regional plan was developed. The metrics were developed based on the UKWIR guidance, the National Framework, and the WRPG, to ensure the regional plan met legal, regulatory and policy expectations through a consultation process. Eight broad metrics were used to develop the WRSE regional best value plan:

- **Environmental**
 - Strategic Environmental Assessment – positive
 - Strategic Environmental Assessment – negative
 - Natural Capital

⁸ April 2023 [Water resources planning guideline - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/115444/water-resources-planning-guideline.pdf)

⁹ Environment Agency, March 2020 [Meeting our future water needs: a national framework for water resources - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/86444/meeting-our-future-water-needs-a-national-framework-for-water-resources.pdf)



- Biodiversity Net Gain
- **Resilience**
 - Reliability
 - Evolvability
 - Adaptability
- **Customer**
 - Customer option preferences

As the WRSE objectives were high-level, they were turned into measurable indices on which best value could be assessed. Each objective was represented by a set of value criteria which, in turn, had an associated metric¹⁰ that measured the additional value it delivered. WRSE used the criteria and metrics to assess the different water resource programmes that were produced through investment modelling. WRSE also used them to compare the shortlisted good value programmes and explain the differences between them and the additional value each delivered. Each programme comprised a series of options and each option has a series of metrics associated with it.

The overarching process for deriving the best value plan (a best value programme of options) was as follows:

1. The individual water companies and teams working on Strategic Regional Options (SROs) uploaded their option information to the WRSE central data landing platform, which contains over 2,000 options.
2. All options that were uploaded into the WRSE Data Landing Platform (DLP) were assessed at an option level for environmental (including SEA, HRA Screening, WFD Level 1 assessment, Natural Capital Assessment, BNG Assessment and INNS Screening) and resilience metric evaluation.
3. The investment model obtained option level scores from the DLP, along with the deployable output benefits and costs information.
4. The WRSE investment model then constructed adaptive programmes¹¹ to meet the challenges based on this information.
5. These candidate programmes were appraised and discussed with customers and stakeholders to gain their views before a regional WRSE adaptive plan was selected for reconciling with the other regions.
6. Following reconciliation, which ensures consistency between regional plans, the WRSE regional plan was then consulted on, and where appropriate, updated. When each candidate regional plan was determined by the investment model, a value for each objective was calculated by aggregating the scores from individual options selected in the plan for each adaptive planning 'situation' through the duration of the plan. Therefore, each situation in a regional plan has its own best value plan score, albeit that the first part of the plan contains common options.

¹⁰ By its nature SEA does not include numerical values for scoring effects. However, in order to incorporate environmental considerations directly into the programme appraisal optimisation model, a SEA metric was developed to summarise the environmental performance of each option in numerical form. The SEA metric was developed from the results of the SEA, HRA and WFD assessment processes, and included non-monetised natural capital. For full details refer to WRSE's WRSE Regional Plan Environmental Assessment Methodology Guidance, WRSE / Mott Macdonald June 2020. [wrse_file_1347_wrse-regional-plan-environmental-assessment-methodology-guidance.pdf](#)

¹¹ WRSE developed a 'root and branch' adaptive tree as the base for forecast for its regional plan investment modelling. This included the most likely set of future challenges and uncertainties facing the south east region over the next 50 years. This required examination of nine different pathways with different combinations of population growth, climate change impacts and levels of environmental ambition. The regional plan identifies the immediate investment needed in all the future pathways. It can then adapt depending on which future occurs. This ensures water companies, including Portsmouth Water, will make the right immediate investment decisions so they can provide resilient water supplies to their customers in the years ahead



It is important to recognise that the assessment stage followed a two-stage process, including an initial high level screening assessment and a detailed assessment stage. The above details the process for the later stage. The initial environmental assessments for the 'screening' stage of WRMP24 option appraisal, completed by Portsmouth Water, helped to shape the feasible option data set that was offered to the WRSE investment model. It acted to validate the unconstrained list screening that Portsmouth Water undertook to ensure environmentally damaging options were not considered further and to flag options with high environmental risk, that can still be considered, but where mitigation will be needed. For example, numerous unconstrained options associated with increased groundwater and surface water abstraction were ruled out ('rejected') due to environmental concerns. Therefore, a degree of professional judgement, informed by regulator and stakeholder engagement, was applied at an early stage of the options appraisal and prior to the investment modelling that determines the least cost and best value plans. It means that the residual feasible list of options used in the investment modelling is already expected to provide 'better value'.

Water company level planning

The option identification and appraisal process was an important stage in the development of the fWRMP24. A multi-stage process was used to develop a feasible option list to be taken forward into the regional investment model; the key steps were:

1. Identified an extensive list of all potential options, the 'Unconstrained Options' List, which either increased available water resource or reduced the water demand.
2. Primary screening of the unconstrained options to refine the options down to a Feasible Options List.
3. Where required, secondary screening of the feasible options to produce a Refined Feasible Options List.
4. The Refined Feasible options was then taken forward for optimisation modelling and programme appraisal from which the Best Value Programmes was derived (as discussed above in the regional planning section).

The unconstrained, feasible and refined feasible options all went through an options appraisal process that screened the options based on overarching principles at two levels. Primary screening reviewed options for showstoppers. Criteria were considered on a pass/fail basis; failure against one criteria, with appropriate justification captured, was sufficient to screen an option out. Early engagement with the Environment Agency supported the assessment of a number of supply options against the question "Is the option promotable - will it likely be objected to by regulator/ customer?" The secondary screening included conducting a preliminary environmental screening of options with physical assets or activities against SEA, HRA and WFD measures. Full details on the appraisal process used to screen the options is contained within WRMP24 Appendix 7A 'Options Appraisal – Options Identification and Screening'¹².

Once the feasible option list had been offered to the regional investment model (IVM), WRSE completed further assessment on the options. This included SEA, HRA Screening, WFD Level 1 assessment, Natural Capital Assessment, BNG Assessment and INNS Screening as noted above. Where the Level 1 assessments identified the need for further assessment, water companies completed the more detailed Level 2 assessments. This included HRA Appropriate Assessment, WFD Level 2 assessment and INNS Risk Assessment.

Revised SEA metrics were populated, reflecting the refined, plan area specific SEA Framework¹³ scoring and the results of any Level 2 assessment work, in addition to two additional environmental assessment streams that were

¹² [7A-rdWRMP24-Appendix-7A-Options.pdf \(portsmouthwater.co.uk\)](#)

¹³ See Section 2.1.1 for more detail on revised SEA framework

requested as part of the consultation exercise, including a Heritage Impact Assessment (that impacted the heritage objective score) and SSSI assessment (that informed the biodiversity objective score).

The metrics for the revised SEA and stage 2 assessments were in turn fed back into the regional model as part of the iterative option selection process.

It should also be noted that if new/more detailed scheme information (e.g design information) was available at the time of company level assessment stage, the assessment utilised the information and allowed for increased certainty of effect in the assessment.

As such, the SEA has been applied iteratively with the preparation of the regional and company plans. Three main teams were involved in this iterative process – the SEA team, WRSE and the plan making team. While there was a good working relationship between the teams, it is to be noted that as per good practice, the SEA team was independent of the others. The SEA team consisted of employees of AtkinsRéalis, while the plan making team comprised of staff in Portsmouth Water and WRSE (Mott MacDonald). It was the role of the SEA Team to iteratively challenge the plan making team.

Environmental and social considerations made in WRMP24 were aligned with the following themes:

- Biodiversity;
- Population;
- Human health (covering noise issues among other effects on local communities and public health);
- Fauna and flora;
- Soil;
- Water;
- Air;
- Noise;
- Climatic factors;
- Material assets (covering infrastructure, waste and other assets);
- Cultural heritage including architectural and archaeological heritage; and
- Landscape.

The SEA Environmental Report of WRMP24 was produced in line with relevant legislation and guidance and the SEA has been developed through various stages. More detail on the integration of environmental considerations into WRMP24 that took place at each stage of the SEA process is detailed below:

2.1.1 Stage A: Scoping

The SEA process for WRMP24 began with the setting out of the Scope of the assessment in a Scoping Report that was developed in March 2022. The Scoping Report built upon the WRSE Regional Plan SEA Scoping Report that was consulted upon in 2020¹⁴. WRSE developed an overarching set of SEA objectives and assessment questions to guide the assessment of the regional resilience plan. These overarching objectives were used as a framework by all water companies under the WRSE banner for their WRMPs, where water companies cross-referenced to the

¹⁴ The WRSE Scoping Report was issued for formal consultation for a six-week period between 18th September and 30th October 2020 to the Statutory Consultees: Natural England, Environment Agency and Historic England. Prior to the formal consultation, the Scoping Report was issued for informal consultation to internal stakeholders to gain early feedback and agreement on key elements of the process. During the formal and informal consultation period stakeholders were able to comment on the proposed scope and approach for the SEA.



regional plan SEA objectives to allow for a consistent approach. It was recognised, however, that certain objectives or sub-themes would involve water company wide considerations rather than just option specific, for example how water companies source power from renewables and further consideration of local conditions/baseline. This company, and plan area, specific detail was considered and used to refine and localise the framework at the WRMP24 SEA level through the preparation of the scoping report.

Portsmouth Water's WRMP24 Scoping Report presented the outputs of the following tasks:

- Exploring the environmental context for the SEA, i.e. reviewing high level messages (e.g. from government departments and agencies in particular) with a view to gaining an understanding of broadly what the SEA needs to focus on.
- Establishing the environmental and social baseline for the SEA, i.e. the current and further situation in the area in the absence of the Water Resource Management Plan, in order to help identify the plan's likely significant effects.
- Identifying particular problems or opportunities ('issues') that should be a particular focus of the SEA.
- Developing an SEA Framework comprising objectives and appraisal questions on the basis of these issues which can then be used to appraise the draft plan.

This Scoping Report was consulted upon from 14th March to 18th April 2022 with the three statutory consultation bodies required under the SEA Regulations, namely Natural England, Historic England and Environment Agency. Local Authorities in the plan area were also consulted.

The consultation responses received were reviewed to ensure that the SEA Framework and associated assessment criteria developed to that date were appropriate and of sufficient robustness for the assessment of the specific options contained within the developing WRMP24. This was an important component of refining the assessment process.

It is important to note that no issues were scoped out at the Scoping stage of the assessment.

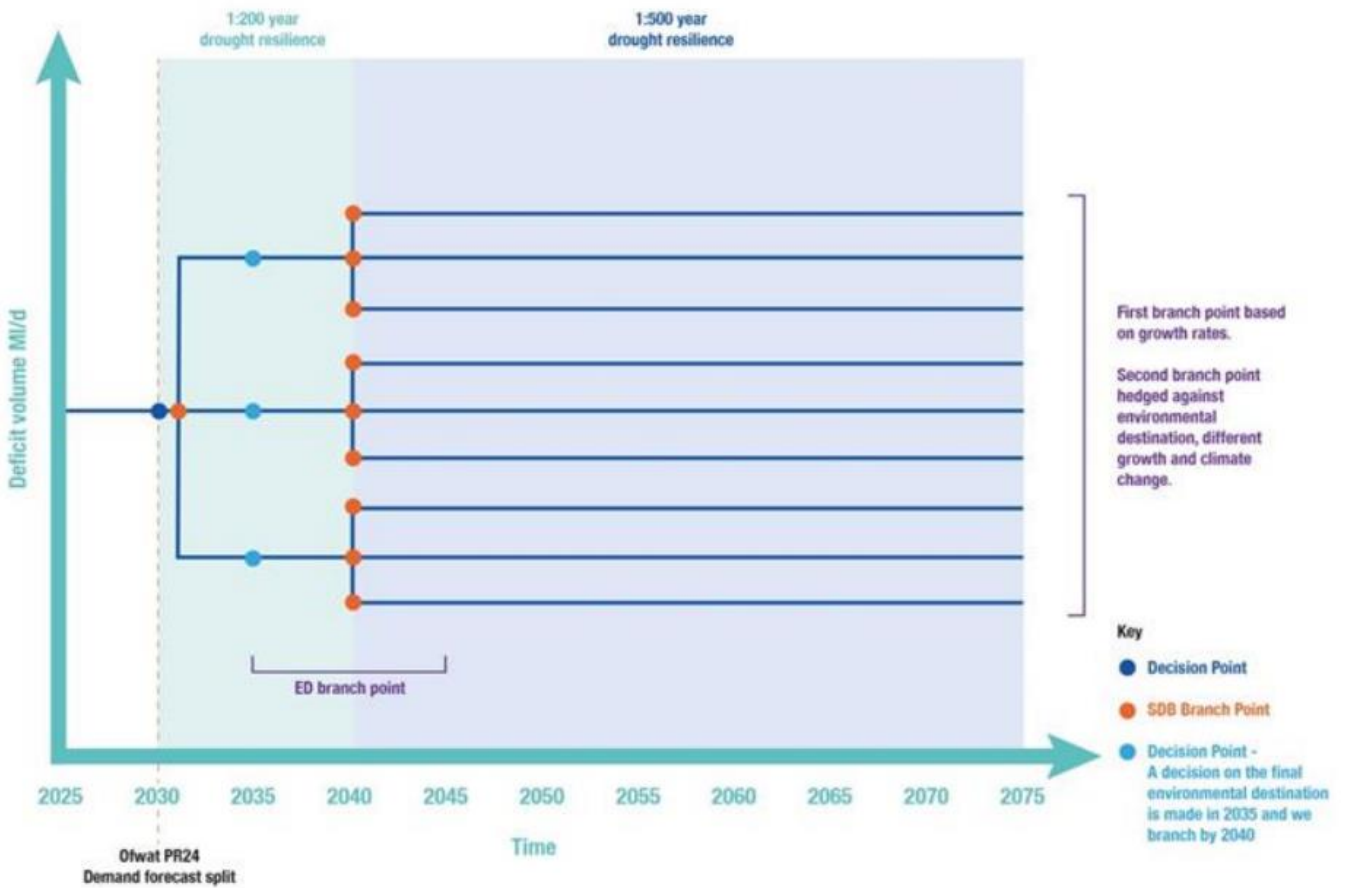
2.1.2 Stage B: Development and Refining Options Assessment Effects

2.1.2.1 Programme Appraisal

As explained in Section 1.4.1 of the SEA Environmental Report, the Regional Plan is an adaptive plan. WRSE characterised the range of challenges in the Southeast using an adaptive situational tree. Figure 1-3 in the SEA Environmental Report (replicated as Figure 2:1 below) shows the different scenarios that make up the situation tree. There are nine different pathways ('situations') spanning from low challenge benign futures to high challenge adverse futures, with different combinations of population growth, climate change impacts and levels of environmental ambition (abstraction reduction). Situation 4 is the reference scenario that has been used for the environmental assessments due to it meeting the guidance from the regulators.



Figure 2 – 1 Adaptive planning approach



To determine the optimum set of options for any given adaptive pathway, Portsmouth Water, through the WRSE regional planning group, assessed the Best Value Plan (BVP). The WRPG describes a best value plan as:

“one that considers factors alongside economic cost and seeks to achieve an outcome that the overall benefit to customers, the wider environment and overall society”.

Chapter 1.4.2 of the SEA Environmental Report sets out the components that make up their reported preferred BVP. Full details are also provided in Chapter 10 the fWRMP24. The Options identified in Portsmouth Water’s BVP include both ‘demand side’ Options (measures that reduce demand for water) and ‘supply side’ Options (measures that increase supply) as set out below:

- Demand
 - Demand reduction;
 - Leakage;
 - Water efficiency;
 - Universal Metering; and
 - Temporary Use Bans (TUBs) and Non Essential Use Bans (NEUB’s)
- Supply side options:
 - Network upgrades;
 - Drought orders;
 - Bulk imports; and



- Additional abstraction from reservoirs.

All the supply options were broken down into two timeframes: pre 2050 and post 2050. The pre and post 2050 options have been assessed in line with the WRSE Regional approach¹⁵ which notes that options featuring in the post 2050 'Plan' become a 'Strategy' as there is significant uncertainty related to planning scenarios and technical improvements for options. For the purposes of the SEA, options that were selected pre-2050 (two in total) were subject to further, more detailed assessment (HRA Appropriate Assessment, WFD Level 2 Assessment and INNS Risk Assessment), where required, which has further informed the SEA and in doing so the regional model. For the options featuring post 2050, it was considered, given the level of uncertainty, it would not be appropriate to complete this more detailed assessment work, as it was thought this would be better undertaken in further iterations of the WRMP, when more detail on population growth, climate change, economic development and the scheme itself were known. The level of certainty of options featuring post 2050 has been decreased in the SEA to reflect the uncertainty of effect, aligning with the regional approach.

There are three demand options featuring in the BVP, as set out in Table 11-2 of the SEA Environmental Report, all of which feature in the year 2025-26.

As set out in chapter 4.6 of the WRSE Regional plan SEA Report¹⁶ the SEA has been an ongoing and iterative process throughout the development of the Regional BVP, and as a result the individual water company BVPs. Key decision-points for influencing the BVP were as follows:

- The options-level SEA assessed the positive and negative effects of each option and identified possible mitigation and enhancement measures that were fed back to the option design teams. Options with major or moderate negative effects will need appropriate mitigation for them to be taken forward. Opportunities to maximise benefits were also considered. Together with the results of the other environmental assessment a list of 'worse performing' options in terms of the environment was developed and these options were removed from the investment model.
- The environmental metrics (translated from the assessment results) were included in the investment modelling to influence the selection of options within the final plan. They were used as part of the development of the plan as one of the 'best value' criteria. WRSE completed the 1st level (L1) of assessment for each of the assessment types (SEA, HRA screening, WFD L1, INNS L1, NC and BNG). Portsmouth Water reviewed and updated the assessments in light of updates to the level of detail available for an option, the localised SEA framework and completed the Level 2 assessments where required. This information was reported back to WRSE and fed into the regional model as part of an iterative option selection process.

Alternatives

In addition to developing the BVP, and as required by the revised Water Resources Planning Guidelines (WRPG), WRSE completed further optimisation runs 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:

- **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; and

¹⁵ WRSE Draft Regional Plan SEA Environmental Report, Revision B (412624-ENV-306)

¹⁶ [wrse-draft-regional-plan-strategic-environmental-assessment-environmental-report.pdf](#)



- **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.

It is important to note that all assessments undertaken in respect of WRMP24 followed the same methodology and utilised the same GIS datasets and assessment rationale and scoring. This approach allowed environmental differences between sites to be identified (through anticipated significant effects for each SEA Objective) and reported in the SEA Environmental Report appropriately.

Mitigating significant effects

The term 'mitigation' encompasses any approach, which is aimed at preventing, reducing or offsetting significant adverse sustainability 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 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.

Mitigation can take a wide range of forms, including:

- Refining intervention measures 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;
- 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; and
- Proposals for changing other plans and programmes.

A full range of mitigation measures has been proposed and is included in relation to each of the proposed options. It is considered that this mitigation will act to strengthen positive effects and minimise negative effects.

A number of mitigation approaches have been considered through 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 proposed Options 'embedded mitigation' has been considered. 'Embedded mitigation' is mitigation that has been incorporated into the development of the Option. Through the SEA process, further 'additional mitigation' has also been identified. 'Additional mitigation' is mitigation that is required to address specific issues relating to significant effects in addition to 'embedded mitigation'. This additional mitigation is set out in relation to each SEA Objective, across each of the Options within the WRMP24. Note also that specific mitigation is also contained within the detailed technical environmental assessments such as that for INNS, HIA, SSSI etc.

Due to the importance of sites designated for nature conservation purposes – in particular those designated under the Conservation (Natural Habitats, and species) Regulations 2017 (as amended)¹⁷, it is worth noting that in addition to the mitigation proposed under the SEA, protection to these sites will be required under the Habitats Directive and this is set out within the HRA to WRMP24.

Cumulative and synergistic effects

¹⁷ Amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which means that SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network and now form part of the UK's national network of European Sites.



As noted in the SEA Directive, there is a requirement to consider secondary, cumulative and synergistic effects of the 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. The WRMP24 SEA sought to complete an in-combination assessment at the strategic level, using details on the schemes available at the time of writing.

The methodology used to complete the in-combination assessment was revised following consultation from Natural England on the draft WRMP24 SEA. A range of meetings were held with Natural England and Environment Agency to agree an approach to assess the cumulative effects via the WRSE environmental subgroup. The revised methodology satisfied their concerns and was also considered appropriate to the level of detail available for the options outlined in the WRMP24.

A key focus of the revised in-combination assessment was that of the effects of the WRMP24 and any drought permits and orders that Portsmouth Water may need to implement, along with other plans in neighbouring water companies (Southern Water and South East Water), specifically supply options contained in their respective WRMPs and drought plans, alongside plans and policies of local authorities.

As agreed with Natural England, the SEA provided a qualitative assessment of the potential cumulative effects of the Local Authority development plans in the Portsmouth plan area with WRMP24. It was recognised that there would be a high level of uncertainty as details of the developments (scheme proposals/masterplans and timings) are unknown. It was noted that there are however important mechanisms set out within the plans, such as the requirement to complete an EIA, to ensure that potential adverse effects are identified and mitigated comprehensively at the appropriate stage of the design and planning process.

The potential for cumulative effects has been identified in respect of a number of options during both construction and operational stages. Mitigation has been proposed, including the need for further investigation e.g. noise surveys, and/or design, where a significant impact has been identified. Where a cumulative impact has been identified between neighbouring plan options, the need for engagement between corresponding water companies and a coordinated approach to development of both projects is identified. This should include regular engagement with stakeholders, including Natural England and Environment Agency.

The cumulative and in-combination effects of the selected options were assessed for the final plan and alternatives. The options which were assessed as having the potential for cumulative and in-combination effects, were fed back into WRSE to identify solutions through methods such as scaling up nearby alternative options, confirming and costing larger mitigation packages to allow the scheme to be retained, amongst others. Appropriate plan wide mitigation and enhancement opportunities were developed to support overall environmental net gain.

2.1.3 Stage C: Preparing the SEA Environmental Report and Stage D: Consulting on the Draft Plan and SEA Environmental Report

The SEA Environmental Report for the WRMP24 describes the process undertaken in carrying out the SEA of the Plan. The document sets out the findings of the appraisals, highlighting any likely significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium, and long-term and permanent and temporary effects), making recommendations for improvements and clarifications that may help to mitigate negative effects and maximise the benefits of the Plan, and outlining proposed monitoring measures.



Iterations of the SEA Environmental Report detailing the outcomes of the Stage A, B and C tasks accompanied the Draft WRMP24 as follows:

- Draft WRMP24 and Draft SEA Environmental Report consultation was undertaken between 14th March to 18th April 2022;
- Revised Draft WRMP24, Statement of Response and Revised Draft SEA Environmental Report with consultation between 15th November 2022 and 20th February 2023.

Stage E follows the adoption of the WRMP24. Chapter 12 of the SEA Environmental Report includes a description of proposed measures envisaged at the time of submission concerning monitoring which informed the development of the wider monitoring approach presented in WRMP24.

Monitoring

In line with the SEA Regulations, the monitoring programme covers significant environmental effects and involves 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.

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. Effective monitoring will also be a key component of ensuring that 'changes in direction' of the WRMP24, in light of the Adaptive planning approach, are done so with a full understanding of how the Plan is performing and what issues are arising.

It was 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 and agreed with relevant regulatory and statutory bodies and stakeholders to ensure the appropriate scale and duration of such scheme-specific monitoring activities proportionate to the assessed environmental risks.

Portsmouth Water already currently undertake a suite of monitoring as committed in the WRMP19 SEA. Monitoring includes annual reporting on environmental indicators in order to demonstrate compliance. It is anticipated that this 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 options, 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 a bespoke, detailed database of evidence to help inform consideration of future iterations of the adaptive plan.

Adaptive Plan Monitoring

WRSE have set out an adaptive regional best value plan. Adaptive planning is an approach to developing flexible long-term delivery strategies in an uncertain future, by setting out investment options for a wide range of plausible future scenarios or alternative pathways. The purpose of adaptive planning is to identify flexible low-regret options based on the comparison of optimal solutions for each plausible pathway. Adaptive planning has decision points (where you decide to switch paths) and trigger points (where the investment programme shifts to another pathway). Section 2 and 10.9 of the fWRMP24 Main Plan provides detailed information on Portsmouth Waters Adaptive Plan. In summary, the Adaptive Plan is focused around three core pathways which are:

- **Stage 1:** The root branch (2025 to 2030) which is based on housing plan growth, medium climate change and current statutory environmental ambitions.



- **Stage 2:** The next three branches (2031 to 2035) include the same environmental ambition and climate change projections but cover a wider range of potential population and household growth scenarios. Uncertainty within the predictions of future economic and demographic futures presents a challenge for water resource management. The UK government has stated aspirations to accelerate the rate of house building to 300,000 new homes per year. However, the UK's exit of the European Union and the global restrictions on migration presented by the Coronavirus pandemic means that the UK is facing a unique period of uncertainty politically, economically and demographically. The need for robust evidence on future housing growth and demographic change are key requirements to the fWRMP24.
- **Stage 3:** The final set of branches (post 2035) focus on how alternative environmental ambition scenarios and climate change forecasts could continue to impact on the future availability of water.

The key purpose of the Monitoring Plan is to ensure Portsmouth Water identify which adaptive pathway is emerging, ensuring the decision and trigger points are correctly identified. It is important to highlight that for Portsmouth Water there are no differences in the investments in Stage 2 resulting from the adaptive pathways and therefore the key trigger point for Portsmouth Water is 2039/40. This results from the implementation of their demand side schemes to meet governmental and regulatory expectations for customer and leakage demand reductions. After 2039/40 the key changes in investment include the delivery of a range of supply side schemes. Effective monitoring will therefore be a key component of ensuring that 'changes in direction' of the WRMP24, in light of the Adaptive planning approach, are done so with a full understanding of how the Plan is performing and what issues are arising.

A monitoring plan is therefore required to set out the measure that will be used to trigger corrective actions, where necessary, and what these corrective measures might be required. These corrective actions could be bringing forward the development of an adaptive option. Likewise, some alternative options might need to be developed in parallel to ensure they are well enough developed should they be required.

Following consultation from Environment Agency on the dWRMP24 monitoring programme, Portsmouth Water produced a new adaptive plan monitoring plan¹⁸, alongside WRSE, to detail what metrics they will monitor to inform which adaptive pathway / alternative future is emerging and what interventions are needed. Portsmouth Water will monitor several components including:

- Measured and forecast population growth and consequential supply-demand impact of changes to distribution input (in Ml/d). This includes property numbers and Portsmouth Water customer population;
- Climate change impact on deployable output;
- Environmental Policy (including licence capping) with respect to the timing and prioritisation of the long-term Environmental Destination which in turn will affect forecast impacts to deployable output after the 2035 decision point;
- Source S Drought Permit – yield and assessments;
- Time limited licence variations;
- Progress with demand side options (e.g. universal smart metering, leakage etc);
- Drought resilience with respect to progress on supply schemes and how delivery is impacting the supply-demand balance (Ml/d). The key supply side scheme for AMP8 is Havant Thicket Reservoir;
- Level of outage; and
- Supply Demand Balance (including imports and exports).

This plan will inform, and be informed by, the SEA monitoring plan which will be constantly reviewed and updated as results are available.

¹⁸ Appendix 10A of fWMRP24



The updated monitoring plan will help demonstrate that the plan can manage identified risks, including the reliance on the savings from demand management. It will identify that we have procedures in place and have identified alternative actions that could be taken and when decisions need to be made.



3. How consultation responses have been taken into account

The SEA Regulations require two consultation periods involving statutory authorities: Natural England (NE), Environment Agency (EA) and Historic England (HE). In the later consultation period, the public are also required to be consulted.

Consultation has been a key element of the development of WRMP24 and associated SEA Environmental Report. With respect to developing the final SEA, there were three key consultation phases, as set out below:

1. SEA Scoping Report Consultation;
2. Draft WRMP and draft SEA Environmental Report; and
3. Revised draft WRMP and Revised draft SEA Environmental Report

3.1 Consultation on SEA Scoping Report

The first public consultation took place in relation to the SEA Scoping Report. This consultation, with Statutory Authorities (NE, EA and HE), took place between 14th March to 18th April 2022. Local Authorities in the Plan area were also consulted. The responses received to the consultation were reviewed and the SEA Framework and associated decision-making questions / assessment criteria updated to reflect. See Chapter 7 of the SEA Environmental Report for further detail. In particular, see SEA Environmental Report Appendix A.1 for details of how the Scoping Report was reviewed in light of the consultation responses received, in order to ensure that the SEA Framework and associated assessment/decision-making criteria developed were appropriate and of sufficient robustness for the assessment of the options contained within WRMP24.

3.2 Consultation on draft WRMP24 and draft SEA Environmental Report

Portsmouth Water prepared their draft plan, dWRMP24, following extensive consultation with stakeholders and regulators. Following approval by Defra, their dWRMP24, and associated SEA Environmental Report and Habitat Regulation Assessment, was published on their website on 15th November 2022. The statutory consultation ran for a 14-week period, closing on 20th February 2023.

In addition to specific requests from NE and EA to address critical areas of concern in the SEA, for example the methodology used to assess the in-combination effects of the Plan, the consultation highlighted changes in legislative and regulatory processes, in addition to updated information being made available, since the draft plan was prepared. Of particular note, this included:

- Government publishing their Environmental Improvement Plan (EIP) (January 2023)¹⁹ - Key to water resources were the government's commitment to setting the following water efficiency and leakage targets for England

¹⁹ [Environmental Improvement Plan 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/environmental-improvement-plan-2023)



- Update to the Water Resources Planning Guideline (March 2023)²⁰ - similar to the EIP, the updates to the WRPG, required Portsmouth Water to change the proposed level of reductions in the revised draft regional plan to meet Government's required 110 l/h/d (dry year) by 2050; and
- Defra's 'Our Integrated Plan for Delivering Clean and Plentiful Water' (April 2023)²¹ - outlines additional actions to meet water targets and transform the water system.

These updates resulted in large scale regional impacts on options selected within the regional plan, the statutory WRMPs across the region, and in turn the associated SEA Environmental Reports. Details of how all the issues were considered and taken account of were set out in the SoR²² that accompanied the revised draft WRMP24 and associated revised draft SEA Environmental Report.

In addition to the change in legislation, during the draft plan consultation period WRSE were working on further regional modelling runs to look at the impact of data input changes from water companies. Work to develop Portsmouth Water's WINEP24 programme had been developing, following the above noted change in legislation. The associated impacts on the SEA from these changes are discussed further below.

3.2.1 Regional Modelling Updates

As set out in section 1.1, Portsmouth have been working with five neighbouring water companies to develop a regional plan for the south-east as part of the WRSE alliance. The regional plan forms the backbone of the Portsmouth Water statutory company plan. The regional approach means it is possible to model and stress-test many different options and solutions through different scenarios and allows for an adaptive planning approach.

The development of the individual company plans and the regional plan is a fully integrated process. Subsequent to the publication of the dWRMP24, the WRSE modelling group undertook further regional model runs to look at the impact of data input changes from different water companies in relation to:

- Population and growth forecasts to reflect updated data not available previously;
- Demand forecasts to reflect the above, and updating the base year for forecasts;
- Data and information on individual options, including option timing, costs and best value metrics, and option availability;
- Demand management options, including commitments to leakage and PCC targets considering Government policy expectations, including in the Government's Environmental Improvement Plan; and
- Other data updates to reflect new data availability.

Each of these data input changes were investigated through WRSE model runs to see the impact of the data changes on the revised plan outputs. This impacted the options selected and the options reported in the various plans set out in the SEA Environmental Report.

3.2.2 Water Industry National Environment Programme

The WINEP is the statutory environmental programme that will continue to be delivered from 2025 onwards. A programme was co-created to cover Portsmouth Water's key environmental activities for restoring sustainable abstractions and improving raw water quality and biodiversity.

²⁰ [Water resources planning guideline - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/114241/water-resources-planning-guideline-2023.pdf)

²¹ [Plan for Water: our integrated plan for delivering clean and plentiful water - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/114241/plan-for-water-our-integrated-plan-for-delivering-clean-and-plentiful-water-2023.pdf)

²² [Water Resources Planning | Portsmouth Water](#)

A new WINEP methodology was published in May 2022, alongside the water industry strategic environmental requirements (WISER) guidance, developed jointly by the Environment Agency, Defra and Ofwat. WINEP is closely linked to WRMP24 as enabling sustainable abstraction, managing the risk of deterioration and environmental damage are an integral part of WRMPs.

The latest WINEP methodology is a new process, divided into six stages involving collaborative work with stakeholders and regulators to develop and propose solutions. The regulators assess proposals to finalise the WINEP. As it is an iterative process on a rolling timeline, the dWRMP24 and SEA Environmental Report presented the developing programme at the time of writing. Further work since that time has resulted in a revised list of WINEP options with the most recent version of WINEP24 being released by the Environment Agency on 3 July 2023. This list was included within the rdWRMP24 and most catchments in the Portsmouth Water supply region will now be investigated during AMP8.

3.3 Defra consultation on revised draft WRMP24 and revised draft SEA Environmental Report

The next step in the statutory process was for Defra (alongside Environment Agency and Natural England who act as technical advisors to Defra and the Secretary of State) to review the rdWRMP24, SoR and revised SEA Environmental Report to ensure it adequately reflected and took account of the representations and feedback received during the public consultation on the dWRMP24.

3.3.1 Statement of Response

Portsmouth Water prepared their Statement of Response, which sets out how they have considered and taken account representations received during the 14-week dWRMP24 public consultation period and changes to legislation as set out above. These changes were reflected in the rdWRMP24 and associated SoR.

The SoR²³ explains what has happened since Portsmouth Water published their dWRMP24 on 15th November 2022, and in particular:

- Portsmouth Water's approach to the public consultation of dWRMP24.
- Technical updates incorporated into the rdWRMP24. These updates reflect new information or modelling outputs that have become available since the publication of Portsmouth Water's dWRMP24. They also include Portsmouth Water's responses to the new regulatory requirements sent out in a March 2023 revised version of the Water Resources Planning Guideline and the demand management targets within Defra's January 2023 Environmental Improvement Plan (EIP), as discussed in section 3.2.
- Overall impressions of the plan along with how many comments Portsmouth Water received about each of the sections of the plan and the associated SEA Environmental Report, and the areas that different groups of responders commented on.
- Details of how Portsmouth Water have addressed the specific regulatory compliance points raised by the Environment Agency within their consultation feedback.
- Any changes Portsmouth Water made as a result of those representations, and the reasons for doing so.
- Where no changes were made following consideration of any representation, the reasons for this.

²³ Portsmouth Water Statement of Response, August 2023 - [Title Page \(portsmouthwater.co.uk\)](https://portsmouthwater.co.uk)

Chapter 4 of the SoR 'Overall impressions of the dWRMP, and which areas of the WRMP received most feedback' gives a summary of the detailed comments made to Defra on the plan and the associated response. Of the 1,292 comments received, 8% of the overall comments received related to the SEA.

The majority of comments received on the SEA work were from environmental regulators; Natural England, the Environment Agency and Historic England. In total, Portsmouth Water received 104 comments from four broad categories of respondents:

- Water retailer – two comments;
- Regulators – 91 comments;
- NGOs – eight comments; and
- Members of the public – three comments.

Appendix B.8.2 of the SoR provides a summary of the comments received on the SEA. The key comments include the following:

- Comments were received which asked for greater clarity and more detail about Portsmouth Water's approach to measuring and delivering Biodiversity Net Gain (BNG).
- Comments were received about the carbon impact and assessment.
- Challenge around compliance with WRPG direction 3(i) (d) in respect of greenhouse gas emissions, carbon assessments and carbon reduction plans.
- Comments were received asking for greater reference to the historic environment in the plan
- Comments were received regarding the identification of transboundary and in-combination effects.
- Comments were received which asked for greater clarity in respect of mitigation and monitoring proposed and secured.
- A consideration of alternative options within the plan.

A range of meetings were held with Natural England and Environment Agency to agree an approach to address the above points via the WRSE environmental subgroup. Appendix C of the SoR sets out the statement of response for each comment received, whether the comment required updates to the WRMP24 and the document reference.

3.3.2 Statement of Response: Additional Information Requested by Defra

On 5th February 2024, Portsmouth Water received a letter from Defra, following a review of the revised draft plan, SoR and associated SEA Environmental Report, requesting further information to support the WRMP and to inform the Secretary of States decision on the next steps for Portsmouth Water's plan.

An additional appendix²⁴ to the published SoR was prepared which set out Portsmouth Water's response to eleven separate issues raised by Defra, including additional information required on the SEA and HRA.

'Issue 2: Environmental Assessments' specifically covered issues raised by Natural England and Environment Agency that affected the SEA Environmental Assessment. Defra specifically requested Portsmouth Water:

- Show how they plan to reduce their reliance on environmentally damaging abstractions in order to achieve sustainable abstraction;

²⁴ [PRT-WRMP24-Defra-Letter-Response_final.pdf \(portsmouthwater.co.uk\)](#)

- Update the SEA, HRA and WFD assessments to adequately cover the Itchen SSSI and potential SACs such as the Meon;
- Provide sufficient justification for the omission of bulk supply agreements from within the required environmental assessments;
- Demonstrate how the SEA has influenced the plan including in the appraisal of feasible and selected options;
- Detail where the additional supply benefits will come from the Source O booster and whether this is associated with increases in abstraction; and
- Provide further clarity on the study area and the transboundary effects characteristics and assessment in the SEA.

To support Portsmouth Water’s response, a meeting was held with Natural England on 14th February 2024 to discuss and better inform their understanding of the actions needed to address the issues detailed under Issue 2 of the Defra Response. In particular Natural England identified that the plan level (WRMP24) assessments needed to sign-post that project level (site / catchment) assessments would be further explored and progressed as part of the AMP8 WINEP. Portsmouth Water set out their commitments to working with the Environment Agency and Natural England on project level investigations as part of WINEP to ensure they address all regulator concerns.

Chapter 2.2 of the revised SoR set out how Portsmouth Water addressed critical areas of concern to NE and the EA. The revised SoR was issued to Defra on 15th April 2024.

3.3.3 Information to inform Permission to Publish

Portsmouth Water received approval to publish a final version of their WRMP and begin work on its implementation on 21st August 2024.

The Environment Agency has highlighted areas where the SEA could be improved and will engage separately with these topics, which are largely covered via the Additional SoR.

4. The reason for choosing WRMP24 as adopted in light of alternatives

As noted in section 1.4.2 of the SEA Environmental Report, WRMP24 is a ‘best value plan’²⁵ which describes the optimum set of options that are compliant with the WRPG - planning for growth in line with Local Authority housing plans, reflective of the expectations of the regulators for a level of abstraction reduction that will deliver the required environmental improvement expected in the future and achieves the 1 in 500 year level of drought resilience from 2025 – 2075. Although one plan has been put forward as the ‘Best Value Plan’, there are alternative plans i.e. alternative approaches to meet the deficit.

All options contained in the alternative plans went through the same level of environmental assessment as those in the BVP and were free to be selected by the WRSE investment model. As set out in chapter 1.4.3 of the SEA Environmental Report optimisation runs were automatically shortlisted by WRSE, to benchmark and appraise the Best Value Plan (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 (LCP) - Investment model run result when optimising on cost only; and
- Best Environmental and Societal Plan (BESP) - Removes the resilience metrics from the Best Value Plan.

Table 1-3 of the SEA Environmental Report, replicated as Table 4-1 below for convenience, sets out implementation dates of interventions and options Portsmouth Water need to deliver under each of the alternative plans. The results show that for the majority of the planning period the selection of options is consistent. This largely results from the requirement of demand reductions to meet Environmental Improvement Plan (EIP) targets (see section 3.2.1 for details). The plans deviate post 2052 (which is after the end of the 25-year planning horizon required for statutory WRMPs) where the LCP and BESP select additional options for treatment capacity (at Service Reservoir C).

The BVP finds an alternative solution for the WRSE region that leads to a situation where Portsmouth Water do not need this additional treatment capacity in their supply area. The optimisation of the BVP (seeking an improvement in the BVP metrics) is undertaken at a WRSE level, not a WRMP level.

Table 4-2 presents a comparison of metrics between the LCP, BESP and the BVP. There is very little difference between these three plans, both in terms of costs, metrics and strategic scheme selection. As would be expected, the LCP scores worse on Environment, with the BESP scoring the highest for environment and society with the BVP generally in the middle. The consistency of the selection of options gives confidence in the option selection process for the plan.

Table 4-1 - Implementation dates of interventions and options under each of the alternative plans²⁶

Option name	LCP	BESP	BVP
‘High Plus’ demand basket (including demand reductions, leakage and Government led interventions)	2025-26	2025-26	2025-26
Non-essential use bans	2025-26	2025-26	2025-26
Temporary use bans	2025-26	2025-26	2025-26

²⁵ WRSE, December 2022 [wrse-best-value-planning-method-statement-december-2022.pdf](#)

²⁶ Portsmouth Water’s fWRMP24 Table 45



Drought Permit: Source S		2025-26	2025-26	2025-26
Upgrade Source O Booster to 25Mld		2033-34	2034-35	2033-34
Import from Southern Water: Potable Resource for Otterbourne WSW to Source A (Import of potable water from Southern Water (SWSHSE) to the west of Portsmouth Water's supply area)		2039-40	2039-40	2039-40
Works A treatment capacity increase to treat and distribute water from Havant Thicket Reservoir	Works A increased treatment capacity and pipeline (phase 1)	2046-47	2046-47	2046-47
	Works A increased treatment capacity (phase 2)	2048-49	2048-49	2048-49
New treatment works at Service Reservoir C to treat and distribute water from Havant Thicket Reservoir	New treatment works at Service Reservoir C and pipelines (Phase 1)	2049-50	2051-52	2049-50
	Additional treatment capacity at Service Reservoir C (phase 2)	2063-64	2061-62	2069-70
	Additional treatment capacity at Service Reservoir C (phase 3)		-	-

Table 4-2 - Comparison of metrics between the LCP, BESP and BVP at a WRSE Regional level²⁷

Metric	LCP	BESP	BVP
Environmental Benefit (%)	22	85	57
Environmental Disbenefit (%)	54	72	77
Natural Capital (%)	33	92	60
Biodiversity Net Gain (%)	45	75	36
Customer Preference for Option Type (%)	28	75	87
Reliability (%)	32	56	54
Adaptability (%)	27	63	39
Evolvability (%)	27	84	56
Environmental & Societal	36	69	63
Environment	39	81	58
Resilience (%)	29	84	50
BVP Weighted (%)	35	72	57
BVP Weighted Situation 4 (%)	17	68	48
BVP Unweighted (%)	34	68	58
Customer Preference Score (%)	76	90	79
Average Cost (£m)*	17824	17769	18119

²⁷ Portsmouth Water's fWRMP24 Table 46



Capex (STPR) (£m)*	4648	4624	4818
Opex (STPR) (£m)*	11882	11826	11984
* programmes were optimised at the regional level and therefore costs for each programme at the WRSE regional costs.			

WRMP24 is specifically designed with adaptive pathways and decision points to enable Portsmouth Water to take account of the uncertainty and future decisions around growth, environmental protection and climate change. The plan has been stress tested to ensure that the options selected are needed under alternative futures and remain the most appropriate set of solutions should the cost and timing of individual options change in the future.



5. Measures to monitor significant effects

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’ (Part 4 Post Adoption Procedures Regulation 17). In addition, the SEA Environmental Report should provide information on a ‘description of the measures envisaged concerning monitoring’ (Schedule 2 Information for Environmental Reports).

In line with the SEA Regulations, the monitoring set out in the SEA Environmental Report (Chapter 14) covers significant environmental effects and involves measuring indicators that enable the establishment of a causal link 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. Monitoring proposals were therefore focused on the following areas:

- 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; and/or
- Where there is uncertainty in the SEA and where monitoring would enable prevention or mitigation measures to be taken.

The monitoring framework was considered in detail at the draft, revised draft and Defra consultation periods and was amended to address the feedback received.

It is to be noted that the results of the monitoring will be of particular benefit to those involved with the further iterations of the WRMP24 and if required, will allow early remediation to be undertaken of any identified adverse effects.

Chapter 14 of the SEA Environmental Report notes 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.

Chapter 15 further notes 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). The Report notes that 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.

In addition to the SEA monitoring plan for WRMP24, Portsmouth Water have a range of other monitoring plans which will complement the SEA Monitoring plan. This includes:

1. **WRMP19 SEA Monitoring Plan:** Portsmouth Water already currently undertake a suite of monitoring as committed in the WRMP19 SEA. Monitoring includes annual reporting on environmental indicators and specific scheme monitoring in order to demonstrate compliance. It is anticipated that this will continue.
2. **Company Level Monitoring Plan:** As part of the development of the WRMP24 Portsmouth Water have also developed a new company level monitoring plan²⁸, alongside WRSE, to detail what metrics they will monitor to inform which adaptive pathway / alternative future is emerging and what interventions are needed. Portsmouth Water will use this to track and monitor progress over the next five years, as they build towards WRMP29, to

²⁸ Portsmouth Water fWRMP24 Appendix 10A

give regulators and stakeholders visibility of their progress. Portsmouth Water will monitor several components including:

- Measured and forecast population growth and consequential supply-demand impact of changes to distribution input (in MI/d). This includes property numbers and customer population;
- Climate change impact on deployable output;
- Environmental Policy (including licence capping) with respect to the timing and prioritisation of the long-term Environmental Destination which in turn will affect forecast impacts to deployable output after the 2035 decision point;
- Source S Drought Permit - yield and assessments;
- Time limited licence variations;
- Progress with demand side options (e.g. universal smart metering, leakage etc);
- Drought resilience with respect to progress on supply schemes and how delivery is impacting the supply-demand balance (MI/d). The key supply side scheme for AMP8 is Havant Thicket Reservoir;
- Level of outage; and
- Supply Demand Balance (including imports and exports).

This plan will inform, and be informed by, the SEA monitoring plan which will be constantly reviewed and updated as results are available. Effective monitoring will also be a key component of ensuring that 'changes in direction' of the fWRMP24, in light of the Adaptive planning approach, are done so with a full understanding of how the Plan is performing and what issues are arising.



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