

WRMP24 STRATEGIC ENVIRONMENTAL ASSESSMENT

POST ADOPTION STATEMENT



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GLOSSARY

Term / Acronym	Definition
BNG	Biodiversity Net Gain
BVP	Best Value Plan
DCLG	Department for Communities and Local Government
EBSD	Economics of Balancing Supply and Demand
ESW	Essex & Suffolk Water
HLS	High-Level Environmental Screening
HRA	Habitats Regulations Assessment
IEA	Integrated Environmental Assessment
INNS	Invasive Non-Native Species
LSE	Likely Significant Effects
NCA	Natural Capital Assessment
NWG	Northumbrian Water Group
NWL	Northumbrian Water Limited
PCC	Per Capita Consumption
SEA	Strategic Environmental Assessment
SoR	Statement of Response
SSSI	Site of Special Scientific Interest
ToLS	Test of Likely Significance
WFD	Water Framework Directive
WRE	Water Resources East
WRMP24	Water Resource Management Plan 2024
WRPG	Water Resources Planning Guideline
WRZ	Water Resource Zone
UKWIR	UK Water Industry Research

1. INTRODUCTION

1.1. Background to the Water Resource Management Plan

As a water company, under sections 37A to 37D of the Water Industry Act 1991, we are required to prepare and maintain a Water Resources Management Plan (WRMP) every five years (reviewed annually) which sets out how we intend to achieve a secure, resilient, and sustainable supply of water for our customers and a protected and enhanced environment, both now and in the long term. Our WRMP sets out how we intend to maintain the balance between supply and demand for water for each of our Water Resource Zones (WRZs) over the statutory planning period from 2025 to 2050, to identify appropriate solutions to meet future pressures. In order to confirm what demand reduction and new supply schemes are required, we forecast how much water we will have available to our customers, taking account of future droughts, climate change, population growth and the need to protect and enhance the environment. Our WRMP24 ensures a secure and sustainable supply of water, focusing on efficiently delivering the outcomes that our customers want, while reflecting the value that society places on the environment.

Engaging with our regulators, customers and other stakeholders is an important element of the WRMP process. Our draft WRMP24, including a draft of our Strategic Environmental Assessment (SEA) Environmental Report, were submitted to Defra in October 2022, and published for public consultation in December 2022. Following the formal consultation, we reviewed the feedback and produced an updated revised draft SEA Environmental Report, revised draft WRMP24 and Statement of Response (SoR) which were published in August 2023. We received further feedback from the Environment Agency and Natural England on our revised draft WRMP24 and Environmental Report, which we responded to in our Further Information in Support of the Consultation Statement of Response, which was published in April 2024. Our final SEA Environmental Report was published alongside our final WRMP24 in October 2024.

1.2. The Strategic Environmental Assessment Process

The objective of Strategic Environmental Assessment (SEA), according to Article I of the SEA Directive and the Environmental Assessment of Plans and Programmes Regulations 2004 ('SEA Regulations'), is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development'.

In order to do this, the SEA Directive requires certain statutory plans and programmes to undergo environmental assessment, which includes preparing an Environmental Report documenting the Likely Significant Effects (LSEs) of the plan, including reasonable alternatives, undertaking consultation on the draft plan and the accompanying Environmental Report and accounting for the Environmental Report and the results of the consultations in decision making.

In the context of water resource management planning, SEA assists in the identification of the LSEs (adverse and beneficial) of the schemes available to secure water supply reliability in a defined water supply area. SEA also helps to identify a preferred programme of schemes for meeting long term water supply reliability through contributing to the WRMP programme appraisal process, informing the decision-making process through the identification and assessment of significant and cumulative effects a plan may have on the environment. The SEA

process is conducted at a strategic level and enables consultation on the potential effects of a plan with a wide range of stakeholders.

The initial screening stage indicated that an SEA was required for our WRMP24 under the SEA Regulations¹ as it constitutes a plan or programme which sets the framework for development consents. Figure 1 shows the stages in the SEA process.

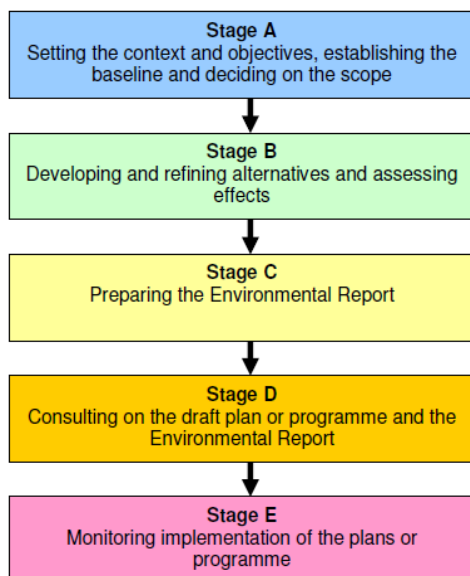


FIGURE 1: SEA PROCESS STEPS

Our approach to ensuring that our WRMP24 protects the environment and takes environmental effects into consideration throughout its development was to initiate the SEA process for WRMP24 in parallel with the WRMP24 planning process and to undertake a fully integrated suite of environmental assessments to meet legislative requirements and the wider expectations set out in the Environment Agency’s Water Resource Planning Guideline (WRPG)².

We undertook early consultation with statutory consultees (Environment Agency, Natural England, and Historic England) on the scope of our SEA and its objectives. These objectives formed the basis used to identify and describe the effects of the developing WRMP, and those related to alternative options, alongside evaluating if any of the predicted effects were likely to be significant. The outcomes of our SEA were reported in our Environmental Report. We also undertook Habitats Regulations Assessment (HRA), Water Framework Directive (WFD) assessment, Invasive Non-Native Species (INNS) risk assessment, Natural Capital Assessment (NCA) and Biodiversity Net Gain (BNG) assessment of our WRMP24 options, which were also included within our Environmental Report.

We published our draft WRMP24 for public consultation alongside our draft Environmental Report describing the SEA of the draft WRMP24 and other supporting environmental assessments in December 2022. Following the end of this consultation in March 2023 we prepared a Statement of Response which presented all the consultation

¹ Part 2 (5) (2) of the SEA Regulations

² Environment Agency, Natural Resources Wales, Office for Water Services (2023). Water resources planning guideline. Available at: Water resources planning guideline - GOV.UK (www.gov.uk).

comments, our response and cross-referred to the revised draft WRMP24 reports, including the revised draft Environmental Report, and associated environmental assessments, where we made changes arising from the consultation comments. Our revised draft WRMP24, alongside our Statement of Response and updated Environmental Report and wider suite of environmental assessments, were submitted to our regulators.

Our final WRMP24 and Environmental Report and associated wider suite of environmental assessments were approved by Defra on the 21 August 2024 and published on our website ([WRMP \(2025-2030\)](#)) in October 2024.

1.3. Purpose of the SEA Post-Adoption Statement

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

- How environmental considerations have been integrated into our WRMP24;
- How the SEA Environmental Report has been account for in the preparation of our WRMP24;
- How responses to the consultation on the SEA Scoping Report and SEA Environmental Report have been accounted for;
- The reasons for choosing the plan as adopted, in light of other reasonable alternatives considered;
- The measures that are to be taken to monitor the significant environmental effects of the implementation of our WRMP24.

This Post Adoption Statement is therefore the last of a series of documents that have been produced as part of the SEA process as described in section 1.2 above.

2. HOW ENVIRONMENTAL CONSIDERATIONS HAVE BEEN INTEGRATED INTO WRMP24

Our Essex & Suffolk Water WRMP24 sits within the wider context of the Water Resources East (WRE) regional Water Resources Plan and establishes the water resource needs for public supply and other needs over the next 25 years for the region, accounting for significant challenges such as economic growth, population change, abstraction sustainability, drought resilience, climate change and environmental destination. While economic cost remains a key consideration, the objective for the regional plan was to build a Best Value Plan for our region and our WRMP24 contributes to this by also following a Best Value Planning approach, as promoted in the WRPG. Best value involves considering more than economic cost, and encompasses providing a benefit to customers, society, and the environment. For WRMP24 we used a Best Value Plan approach as the basis for our decision making to ensure we plan for the right outcomes for society, the environment, and our customers. The SEA process is a fundamental input to the Best Value Planning process, ensuring that environmental considerations are integrated into the plan. The integration of environmental considerations into our WRMP24 ranged from high level policy decisions, for example on leakage, metering, and water efficiency programmes, through to the inclusion of environmental metrics in Best Value Planning modelling, to specific environmental assessments of the concept stage design of individual supply side options and the cumulative and in-combination effects of these options.

The scoping stage of the SEA set the context and scope for our SEA and Environmental Report. Our SEA Scoping Report was issued for consultation to our statutory consultees in February 2022. The report presented our SEA objectives, a review of the policies plans and programmes relevant to our WRMP24 and a review of current baseline environmental and socioeconomic information for our region.

As a precursor to the SEA, high-level environmental screening (HLS) assessments were completed in January and February 2022 on the supply-side options initially proposed. These highlighted environmental risks and constraints at an early stage in the option development process, in accordance with UK Water Industry Research (UKWIR) guidance³. The environmental screening findings were used to inform whether options should be rejected due to potentially significant environmental effects, or whether they could proceed to the next stage of consideration, and if so, to identify suitable mitigation measures to be incorporated into option development if necessary. Of the 26 options subject to high level environmental screening as part of our options development process, one option was rejected on environmental grounds and did not proceed further through the options development process. Further detail on the high level environmental screening is provided in Section 5 of our WRMP24 Supply Option Development technical report.

Following the HLS assessments, a detailed options-level assessment approach was undertaken, for both supply and demand side options, which was aligned with Water Resources East (WRE)'s Integrated Environmental Assessment (IEA) process to ensure consistency and efficiency. Each option was assessed against the SEA objectives, which can be found in section 3.7 of our Environmental Report, using defined effect assessment and evaluation criteria based on relevant spatial datasets and professional judgement. The assessment indicated whether the proposed option would help meet (a positive effect) or prevent achievement (a negative effect) of the

³ Environmental Assessments for Water Resources Planning (21/WR/02/15) UKWIR (March 2021)

SEA objectives. The level of effect was assigned using a qualitative scale ranging from positive effects (minor, moderate, major) to negative effects (minor, moderate, major), with neutral used for no or negligible effects. Where potential negative effects were indicated, mitigation measures were identified as part of the assessment process and fed back into iterative option development.

The SEA process produced a series of four summary metrics for each option summarising the output information. The metrics were positive construction, negative construction, positive operation, and negative operation effects.

To support the SEA, and inform the option selection, several other environmental assessments were undertaken:

- Habitat Regulations Assessment (HRA) - a separate statutory requirement, which also fed into the SEA biodiversity objective on designated sites. The HRA ensured that the options taken forward would not affect the integrity of Natura 2000 sites, either alone or in-combination with other projects or plans. Where potential risks were identified in the HRA Test of Likely Significance (ToLS), the next stage HRA Appropriate Assessment was undertaken.
- Water Framework Directive (WFD) Assessment - a separate statutory requirement, which also fed into the SEA objectives on biodiversity and water. Options underwent an initial basic screening process and if required a detailed impact screening as well. Mitigation and monitoring recommendations supported option development, with the results used as part of the final assessment of the WRMP24 and its cumulative effects.
- Biodiversity Net Gain (BNG) - fed into the SEA objective on protecting biodiversity, priority species and habitats. BNG was considered at both the option and programme level.
- Natural Capital Assessment (NCA) - fed into several SEA objectives. NCA results provided a quantitative basis for qualitative professional judgements made throughout the SEAs. The outputs were also used to inform option selection and to further feed into decision-making as part of the Best Value Planning process.
- Invasive Non-Native Species (INNS) - fed into the SEA objectives on biodiversity and water. The assessment looked at the risk, based on severity and frequency of an impact, for each option to cause the spread of INNS.

3. HOW THE ENVIRONMENTAL REPORT HAS INFLUENCED THE WRMP24

Environmental considerations, in the form of the results from our SEA, presented in Section 5.5 of our Environmental Report, as well as the outputs from the other environmental assessments, presented in section 5.6 of our Environmental Report, have influenced the development of our WRMP24. Including the Best Value Plan (BVP), alternative plans and their constituent options.

Our Best Value Planning approach incorporated eight metrics generated by the environmental assessment process. These metrics were selected to show how options contribute to certain topics. The metrics enabled the environment to be directly considered in analysis and selection of individual options and portfolios / programmes of options at an early stage in the planning process. It is acknowledged in our Environmental Report that the option designs were assessed at concept stage and, as the detailed design of the options progresses, the environmental assessments and potential mitigations will be revisited.

For incorporation of the environmental assessments into Best Value Planning, it was assumed that recommended mitigations measures would be applied. The SEA results, alongside selected other assessment results were utilised to create metrics to support the Best Value Planning modelling. The values for each metric were determined using the SEA scores, with minor amounting to +/- 1, moderate amounting to +/- 4 and major amounting +/- 8. These scores were input to the modelling alongside other metrics to guide WRMP decision making. The Best Value Planning environmental metrics are set out in Table 4-4 of our Environmental Report.

This iterative process resulted in the development of the feasible options lists and subsequently to the constrained option list used within BVP modelling.

In the development of our WRMP24 we considered how selected options might interact and combine to yield positive or negative effects on the SEA objectives, as part of a cumulative assessment. This is covered in Section 7.1 of our Environmental Report. We also considered the effects of the BVP and reasonable alternatives in combination with other known projects, plans and programmes in the Anglian region and in the context of the WRE regional plan and other water companies' plans. The outcomes of these assessments are covered in Section 7.2 of our Environmental Report.

4. CONSULTATION

4.1. Consultation on the SEA

The SEA process consisted of the following consultation phases.

4.1.1. Scoping Report Consultation

Our Scoping Report was issued for a formal consultation to the three statutory bodies, the Environment Agency, Natural England, and Historic England, from 28 February for five weeks.

Following the Scoping Report consultation period, all consultation responses were reviewed and considered as appropriate. A total of 56 comments were received, encompassing agreement with aspects of the proposed approach, sources to assist in its application, methodological questions and clarifications, and suggested modifications and enhancements to the proposed approach and SEA assessment framework.

As part of the best practice approach to the SEA, we also considered the scoping consultation comments that had been made on other water companies' WRMP SEA Scoping Reports, and some adjustments were made accordingly.

Further detail around the comments made and the resulting amendments can be found in Section 3.5 and 3.6 of our Environmental Report.

4.1.2. Draft WRMP24 SEA Environmental Report

Our Draft WRMP24 SEA Environmental Report and the accompanying environmental assessment reports were provided to Defra in October 2022 and published alongside our Draft WRMP24 in December 2022 for statutory and public consultation. Following the closure of the consultation period, all consultation responses were reviewed and considered.

4.1.3. Statement of Response

In August 2023 we published our Statement of Response which presented all the consultation responses received during the consultation on our Draft WRMP24, Draft WRMP24 SEA Environmental Report and accompanying environmental assessments, our response to those comments, and set out the resulting changes which we made to these documents, to create our revised draft WRMP24, revised draft WRMP24 SEA Environmental Report and accompanying environmental assessment reports.

4.1.4. Further Information to the Statement of Response

Following the publication of our revised draft WRMP24 and SEA Environmental Report in August 2023, we received further feedback from the Environment Agency and Natural England, which we responded to in our Further Information in Support of the Consultation Statement of Response, which was published in April 2024. As a result of this we updated our Environmental Report, taking the regulatory feedback into account. Our final WRMP24 Environmental Report and associated environmental assessments was published alongside our final WRMP24 in October 2024.

4.2. Consultation on the draft WRMP24

As described above in section 4.1.2, our draft WRMP24, draft WRMP24 SEA Environmental Report and the accompanying environmental assessment reports, were published in December 2022 for statutory and public consultation. Following the consultation period, we reviewed the comments that were related to our SEA and associated environmental assessments and made the appropriate changes. These are detailed in our Statement of Response, which was published in August 2023 alongside our revised draft WRMP24, revised draft WRMP24 SEA Environmental Report and accompanying environmental assessment reports.

Table 1 presents a summary of the consultation responses that relate to the SEA, our response and any resulting changes made. To see the comments and our responses in full, please refer to our [Statement of Response](#).

TABLE 1: SUMMARY OF DRAFT WRMP24 CONSULTATION RESPONSES RELATING TO THE SEA

Consultee	Summary of Comment	Summary of Our Response & Resulting Changes made to SEA Environmental Report or Related Assessments
Environment Agency	Improved clarity within the Environmental Report is required across several areas.	We updated the Environmental Report to provide clarification and further detail on the identified areas.
RSPB	The organisation encourages further discussions around mitigation impacts, with some challenging issues identified within the Habitats Regulations Assessment (Appendix F of the Environmental Report)	We welcomed the offer of continued discussion and noted that as the detailed design of the options progresses the environmental assessments and potential mitigations will be revisited as more detail is worked through for each scheme. The main WRMP24 report was updated to reflect this response.
RSPB	Noted disappointment by the ambition around Biodiversity Net Gain (BNG) being limited to the 10% minimum target.	The WRMP24 options are at the concept stage of design and are not supported by survey data and therefore it is not possible to develop detailed mitigation and enhancement proposals for delivering 10% BNG, or more than 10%, at this stage. Any decisions regarding over-delivering against statutory requirements will need to be reviewed against the additional environmental benefit gains and the impact on bills to our customers. The main WRMP24 report was updated to reflect this response.
RSPB	Identified mitigation of construction control measures, as a high level overview, does not give sufficient confidence that impacts on biodiversity can be adequately mitigated.	The WRMP24 options are at the concept stage of design and are not supported by survey data and therefore it is not possible to develop detailed mitigation and enhancement proposals for delivering 10% BNG at this stage. As more detailed design progresses for each option, we will look to identify BNG opportunity areas and develop BNG mitigation and enhancement opportunities. The Environmental Report HRA Appendix was updated to include a timescale for further work and information gathering needed.
RSPB	Concerns for options where a river will be crossed, which may interrupt flow of water and sediment. Without schematics showing the pipeline route no further comment is possible.	It has been assumed that directional drilling will be undertaken where water courses are crossed. Maps with specific locations of our water resource options cannot be published on our website for security reasons. An unredacted version is submitted to Defra and the Environment Agency, which we will ensure is provided to the RSPB. The main WRMP24 report was amended to explain this.
RSPB	There is a limited evidence base for robust in-combination effects assessment due to limited information provided for each option. Importance of detailed consideration of in-combination impacts with Sizewell C.	Maps with specific locations of our water resource options cannot be published on our website for security reasons. An unredacted version is submitted to Defra and the Environment Agency, which we will ensure is provided to the RSPB. The main WRMP24 report was amended to explain this. Sizewell C was included in cumulative effects assessments for all environmental assessments. All options included in Our Best Value Plan, alternative plans and adaptive programmes were assessed at their concept stage, as the detailed design progresses the environmental assessments and potential mitigations will be revisited.
WRE	Show that the environmental improvements promised by the plan are real and significant and the potential for abstraction reductions to be complemented by nature-based approaches will be included in more detailed optioneering.	Improvements from the plan are considered as part of the SEA and reported within the Environmental Report. Nature-based approaches form a key part of proposed mitigation for HRA/BNG/NCA assessments.
Suffolk Wildlife Trust	The WRMP should recognise the importance of County Wildlife Sites.	The WRMP24 options were assessed at the concept stage of design for their environmental impacts and benefits. As the detailed design of the options progresses the environmental assessments and potential mitigations will be revisited, including consideration of County Wildlife Sites.

Consultee	Summary of Comment	Summary of Our Response & Resulting Changes made to SEA Environmental Report or Related Assessments
Suffolk Wildlife Trust	There is a need for better evidence to understand water requirements and pressures on environmental receptors and how these are likely to be affected by WRMP options, particularly for fen habitats and intertidal saltmarshes.	The WRMP24 options were assessed at the concept stage of design for their environmental impacts and benefits. As the detailed design of the options progresses the environmental assessments and potential mitigations will be revisited, including consideration of fen and saltmarsh habitats. The Environmental Report HRA Appendix was updated with the information around impacts to fen and estuarine saltmarsh habitats.
Suffolk Wildlife Trust	BNG should be achieved for each option at a project level. The WRMP should aim to achieve 20% BNG, Nature Based Solutions (NBS) provide a significant opportunity to achieve this.	The options for the Best Value Plan Biodiversity Net Gain assessment have been assessed in accordance with the BNG guidance around master planning, considering the WRMP as a whole. Any decisions regarding over-delivering against statutory requirements will need to be reviewed against the additional environmental benefit gains and the impact on bills to our customers. The main WRMP24 report has been updated to reflect this response as well as to reference NBS.
Natural England	Environmental assessments must be for the plan as a whole, including decisions and risks.	The Environmental Report includes a cumulative and in-combination effects assessment as part of the SEA. This assesses the impacts of the plan as a whole, alongside the impacts of other known plans and programmes. The outputs from our SEA have fed into our Best Value Planning process.
Natural England	Support not concluding no adverse effect on integrity for options to be delivered in subsequent WRMPs where there is currently a lack of detail and investigation. This conclusion is not final, and the option can continue being developed. However, there should be a clear plan and timeline to gather the necessary information and mitigation detail should be included within the plan.	The HRA appendix to the Environmental Report was amended to include timescales for further work and information gathering regarding design and mitigation needed to finalise an HRA.
Natural England	<ol style="list-style-type: none"> ESW-EFR-007 does not have an SEA assessment. Why ESW-EFR-002B was picked over ESW-EFR-002 when it appears to have a greater environmental impact. A full assessment of the impacts of additional abstraction needed for ESW-RES-002 should be investigated within this plan. Mitigation in SEA will need to be fully delivered in additional to standard best practice and agreed with regulators at the project stage to avoid impacts on Sites of Special Scientific Interest (SSSIs) 	<ol style="list-style-type: none"> ESW-EFR-007 was not selected in the Best Value Plan or in the Adaptive Pathways. The Best Value Planning methodology considered environmental metrics, when balancing the need to meet demand for water in the region, cost and environmental impact, ESW-EDR-002B performs better as part of the plan. Additional abstraction is assessed as part of the plan, and in combination with other options. The WRMP24 options were assessed at the concept stage of design for their environmental impacts and benefits. Environmental assessments and potential mitigations will be revisited as more detail is worked through for each scheme.
Natural England	Failure of or increasing an existing failure of monitoring specifications for groundwater dependent SSSIs related to an abstraction induced drying would constitute a deterioration.	Comment noted.
Historic England	Lack of suitable references to the historic environment.	The historic environment is considered as part of the SEA. A summary of the outcomes is presented within the main WRMP24 report, with further information in the Environmental Report.
Historic England	Noted the lack of information on locations made it difficult to comment on potential impacts	Maps with specific locations of our water resource options cannot be published on our website for security reasons. An unredacted version is submitted to Defra and the Environment Agency, which we will ensure is provided to Historic England. The main WRMP24 report was amended to explain this.

5. RATIONALE FOR SELECTION OF THE FINAL OPTIONS FOR THE FINAL WRMP24

5.1. Option Level Alternatives

All feasible supply-side and demand management options were subject to assessment against the SEA process, as outlined in Section 2 and 3 above. This process provided the rationale for the rejection of options on environmental grounds, as well as producing a list of options that could be considered as part of the Best Value Planning Process, which itself used various environmental and other metrics to select options based on the timing and size of the supply demand deficit and to meet the other policy and regulatory expectations. Therefore, through these steps, options level alternatives for both future demand management and new water supply options were explored. They were then rationalised to those available for selection at the plan scale, with details about their environmental risks and opportunities available for review.

5.2. Programme Level Alternatives

Assessing all demand and supply-side options via the same SEA process and to the same level of environmental assessment informed the development of the alternative plans and adaptive programmes as well as enabling cumulative and in-combination assessments to be undertaken at a programme level on all the alternative plans.

Our WRMP24 includes consideration of the following alternatives to our Best Value Plan:

- Least Cost Plan
- Ofwat Core Plan
- Best Environment & Society Plan

A Least Cost Plan was prepared as a benchmark to appraise our other alternative plans against. Whereas the Best Value Plan, as described in Section 2, includes environmental metrics from the SEA, the Least Cost Plan is determined by Economics of Balancing Supply and Demand (EBSM) modelling which applies optimisation techniques to select the options with the least cost, to address deficits at annual timesteps. Following EBSM modelling and the Best Value Planning assessment, our Least Cost Plan and Best Value Plan comprise of the same options.

Our Ofwat Core plan includes all the Best Value Plan Options that are needed in AMP8 and 9 but does not include those which are driven by Environmental Destination abstraction sustainability reductions in 2040s due to low levels of certainty around the scale of reductions.

Our Best Environment & Society Plan presents a plan with the lowest level of abstraction from existing sources (i.e. high (Enhanced) Environmental Destination scenario), as well as the lowest level of leakage and PCC. The options selected are broadly similar to our Best Value Plan and Least Cost plans, with the notable exceptions that:

- It also includes Southend Water Reuse and Canvey Island Desalination options in Essex; and
- In Northern Central it includes both Corton Desalination and Caister Water Reuse options instead of the North Suffolk Winter Storage Reservoir, as these would resolve deficits earlier than the reservoir.

This means that in addition to all our Best Value Plan schemes, the Best Environment & Society Plan requires the Southend Reuse scheme and a 190 MI/d desalination plant in Essex. We do not believe this would be a good outcome for the environment or our customers, as the desalination scheme:

- Has the highest carbon and operational costs given the process has the highest electricity demands (kwh/MI/d of water produced).
- Produces a large brine effluent that would need to be discharged to sea.
- Has a significant capital cost approaching £1bn.

Our alternative plans followed the SEA process, described in Section 2, to identify and assess any potential effects of each plan on the environment. This included assessing potential in-combination and cumulative effects. The option designs were assessed at concept stage and, as the detailed design of the options progresses, the environmental assessment, and potential mitigations, as well as opportunities to incorporate additional environmental enhancements and link with local strategic priorities, will be revisited. Further detail around the assessments of the alternative plans can be found in Section 6 and 7 within our Environmental Report.

As part of WRMP24 water companies also had to adopt an adaptive planning approach where:

- There is significant uncertainty, particularly in the first five to ten years of the planning period;
- A strategic decision needs to be made in the plan's medium term but where there is a long lead in time; or
- There is large long-term uncertainty which might lead to consideration of different preferred options.

We identified that our Best Value Plan was sensitive to uncertainties around four areas:

- Customer demand (PCC);
- Environmental Destination abstraction licence sustainability reductions;
- Habitats Regulations sustainability reductions; and
- The lead in time for delivering the North Suffolk Reservoir.

As result of these uncertainties, we have four Adaptive Programmes to our Best Value Plan. Whilst these programmes are not formal alternative plans, the SEA and environmental assessments outlined in Section 2 were undertaken on both the options within the programmes as well as looking at any potential in-combination and cumulative effects of the programmes. Further details can be found within Section 6 of our Environmental Report.

6. MONITORING OF THE WRMP24

Regulation 17 of the 2004 SEA Regulations⁴ requires the responsible authority (Essex & Suffolk Water) to monitor the significant environmental effects (both positive and negative) of the implementation of our WRMP24. This is an essential on-going element of the SEA process. Monitoring helps ensure that the identified SEA objectives are being achieved and track environmental effects to show whether they arise as anticipated in the SEA appraisal. This allows for early identification of any unforeseen adverse effects and would trigger the deployment of any mitigation or remedial actions.

The Department for Communities and Local Government (DCLG) guidance states that it is inappropriate to monitor everything, but that 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.

Table 2 presents the SEA monitoring proposals for our WRMP24. Indicators have been adapted to those developed as part of the SEA Framework, which is presented in Table 3.2 in our Environmental Report.

Any site and project-specific monitoring requirements for options included within the Best Value Plan will be developed during the planning process closer to the time of implementation. Monitoring proposals will be discussed with relevant key regulatory bodies and stakeholders. This monitoring is important to build up an understanding of the developing environmental risks associated with the implementation of our WRMP24, but also to share knowledge, best practice, lessons learned and innovation.

Further information on the monitoring of our WRMP24 is presented in Section 9 of our Environmental Report.

⁴ The Environmental Assessment of Plans and Programmes Regulations 2004, SI 1633, 2004, available here: <https://www.legislation.gov.uk/uksi/2004/1633/contents>

TABLE 2: WRMP24 ENVIRONMENTAL MONITORING

SEA Objective	Proposed Indicators	Proposed Timescale	Commentary
To protect designated sites and their qualifying features.	Area (ha) and number of statutory and non-statutory ecological sites what will be harmed or lost to WRMP options Sites of Special Scientific Interest (SSSI) monitoring	During and post-construction	ESW are responsible for collecting data on condition of specific protected sites.
To deliver BNG, protect biodiversity, priority species and vulnerable habitats such as chalk rivers.	Area of blue and green infrastructure created % of habitat creation or existing habitat enhancement	During and post-construction	ESW are responsible for collecting data on BNG units lost and provided for each project.
To avoid spreading and, where required, manage invasive and non-native species (INNS).	% of INNS risks mitigated	A construction related INNS risk assessment should be conducted in the future.	ESW to undertake INNS risk assessments and implement risk management for all relevant projects.
To meet WFD objectives relating to biodiversity.	Ecological status of water bodies	Annually	ESW to undertake WFD assessments for all relevant projects. Monitor status of water bodies (relevant to projects) using publicly available information.
To protect and enhance the functionality and quality of soils, including the protection of high-grade agricultural land, and geodiversity.	Area of agricultural land (by grade) lost to WRMP options	During construction	ESW to record area of land that is required for development by projects.
To reduce or manage flood risk, taking climate change into account.	% of flood risks noted in Flood Risk Assessment for projects mitigated	During construction	ESW already collect and make use of publicly available data from sewerage undertakers on properties that experience flooding from public sewers, which would help identify if the risk of flooding has increased.
To enhance or maintain surface water quality, flows and quantity.	Chemical status of water bodies The monitoring of river flows (to inform surface water abstraction approach)	Annually	ESW to access publicly available information and/or commissions studies where project-level risks are identified. ESW to work with EA to understand river flows and any impacts on available abstraction.
To enhance or maintain groundwater quality and resources.	Number of geological sites affected Groundwater quality testing Groundwater levels	Annually	ESW to access publicly available information and/or commission studies where project-level risks are identified.
To meet WFD objectives and support the achievement of environmental objectives set out in River Basin Management Plans.	Achievements against WFD objectives	Annually	ESW to access publicly available information and review level of performance against WFD objectives in order to identify project-level sensitivities.
To increase water efficiency and increase resilience of water supplies and natural systems to droughts.	Number of supply disruptions per annum	Annually	ESW already collect and report data on supply restrictions.

SEA Objective	Proposed Indicators	Proposed Timescale	Commentary
To reduce and minimise air emissions during construction and operation.	Local air quality monitoring	During construction	ESW will consider recording information on vehicle movements and compliance with designated construction traffic routes if required. Project level air quality assessments will be used to identify sensitive receptors where monitoring may be required.
To minimise/reduce embodied and operational carbon emissions	Reduction of greenhouse gas emissions per MI/d Energy use from new operations and change in energy use per MI/d % energy supplied by renewable sources Reduction of operational and capital carbon emissions Number of options that utilise existing infrastructure Volume of waste generated Waste disposal method by %	Annually	ESW already collecting information as part of monitoring progress toward NWG's Emission Possible Plan to achieve net zero by 2027.
To introduce climate mitigation where required and improve the climate resilience of assets and natural systems.	% of climate risks mitigated	Every five years	ESW already have access to freely available information on different types of flooding (internal/external) and this would be used to identify areas where resilience of the assets is not being achieved.
To conserve, protect and enhance landscape and townscape character and visual amenity.	Number of WRMP options including additional landscaping	Post-construction	ESW would record the amount of landscaping provided and the number of complaints received regarding visual amenity.
To conserve, protect and enhance the historic environment including the significance of designated and non-designated cultural heritage (including archaeology and built heritage), including any contribution made to that significance by setting.	Number of historic assets damaged by a WRMP option Number of historic assets enhanced by options	During and post-construction	ESW to collect information at project level on cultural, historic and industrial heritage. Access information from Historic England on condition of protected features. ESW to record actions that have avoided or enhance historic assets.
To maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing.	Number of complaints	During construction phases	ESW to collect information on, and formerly acknowledge, all complaints received during construction at project level.
To secure resilient water supplies for the health and wellbeing of customers.	% of people with deficits for each WRMP	Annually	ESW already collect information on water supply performance.
To increase access and connect customers to the natural environment, provide education or information resources for the public.	Number of public rights of way closures or diversions Number, type, and area of community assets created Km of new footpath/cycleway created	During construction phases Post-construction	ESW to collect data to monitor any difference between predicted and actual impacts.
Maintain and enhance tourism and recreation	Number of tourism assets created	Post-construction	ESW to collect visitor numbers to existing recreational sites.

SEA Objective	Proposed Indicators	Proposed Timescale	Commentary
Minimise resource use and waste production	% of A-Rated, recycled, re-used material used in infrastructure options Number of options that utilise existing infrastructure Volume of waste generated Waste disposal method by %	Annually	ESW to collect information on material and waste
Avoid negative effects on built assets and infrastructure	Number of complaints Number of road closures or diversions	During construction	ESW to collect information during construction period.

7. AVAILABILITY OF DOCUMENTS

Our final WRMP24, SEA Environmental Report and supporting environmental assessment documents can be found on our website at:

<https://www.nwg.co.uk/responsibility/environment/wrmp/wrmp-2025-2030/>

8. APPENDIX A - POST ADOPTION PROCEDURES

Part 4 of the SEA Regulations Environmental Assessment of Plans and Programmes Regulations 2004 requires Essex & Suffolk Water, 'as soon as is reasonably practicable' after the adoption of the WRMP24 to:

1. Make a copy of the final WRMP24 and SEA Environmental Report available on a public website at which documents may be viewed and downloaded free of charge.
2. Provide a copy of the relevant adoption documents by email or post to any person who requests a copy, as soon as reasonably practicable after receipt of that person's request.
3. Notify the public and potentially affected parties of their availability.
4. Inform the statutory consultees and other parties who responded.
5. Issue a statement containing:
 - How environmental consideration have been integrated into the plan.
 - How the SEA Environmental Report has been taken into account.
 - How responses to the consultation on the SEA Environmental Report have been taken into account.
 - Reasons for choosing the plan as adopted, and why other reasonable alternatives were not taken forward.
 - The measures that are to be taken to monitor the significant environmental effects of the implementation of the plan.

Essex & Suffolk Water evidence of delivery of the above:

- Requirements 1, 2 and 3 have been fulfilled by the publication of the WRMP24 and SEA documents on our website and a press release on 14th November 2024.
- Requirement 4 has been fulfilled by informing the statutory consultees and other parties who responded to the SEA consultation of the adoption of the WRMP24. This included the provision of the website link to the final WRMP24, SEA Environmental Report and supporting documents.
- Requirement 5 has been fulfilled by the publication of this document.