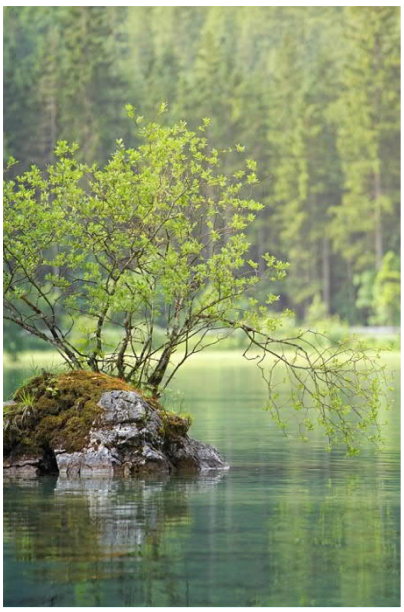

Method Statement: Environmental Assessment

November 2022

Title	Method Statement: Environmental Assessment
Last updated	November 2022
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A consultation on the WRSE Method Statements was undertaken in Autumn 2020 – the consultation details can be viewed on the WRSE engagement hq platform at https://wrse.uk.engagementhq.com/method-statements.

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Executive Summary

Water Resources South East (WRSE) is developing a multi-sector, regional resilience plan to secure water supplies for the South East to 2075.

We have prepared Method Statements setting out the processes and procedures we will follow when preparing all the technical elements for our regional resilience plan. We have consulted on these during the plan preparation process to ensure that our methods are transparent and, as far as possible, reflect the views and requirements of customers and stakeholders.

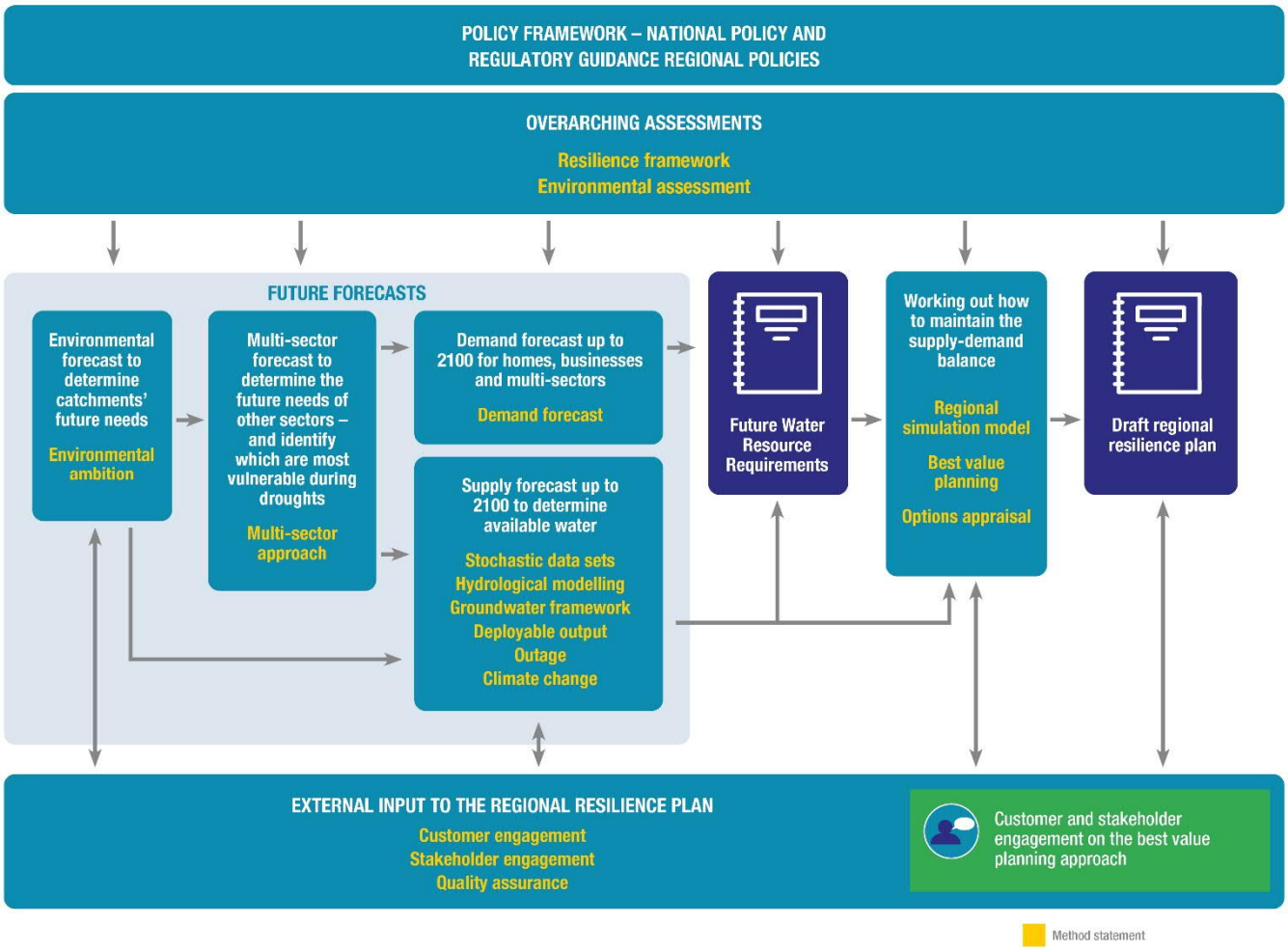
Figure ES1 illustrates how this environmental assessment Method Statement will contribute to the preparation process for the regional resilience plan.

This Method Statement sets out the approach to how environmental impacts and benefits will be evaluated and used to inform an environmentally compliant and best value regional plan. The approach outlined within the Method Statement is also designed so it can be undertaken at the scale of the regional plan but then also applied to individual water company water resources management plans.

A separate Method Statement sets out how the regional plan will achieve environmental enhancements in the long term (our environmental ambition incorporating environmental destination scenarios) for the benefit of everyone.

A separate environmental scoping report for the Strategic Environmental Assessment has been produced and consulted upon. This provides in detail the processes that will be undertaken during the assessment period. The Scoping Report (consultation version) is available at the WRSE website document library.

Figure ES1: Overview of the Method Statements and their role in the development of the WRSE regional resilience plan



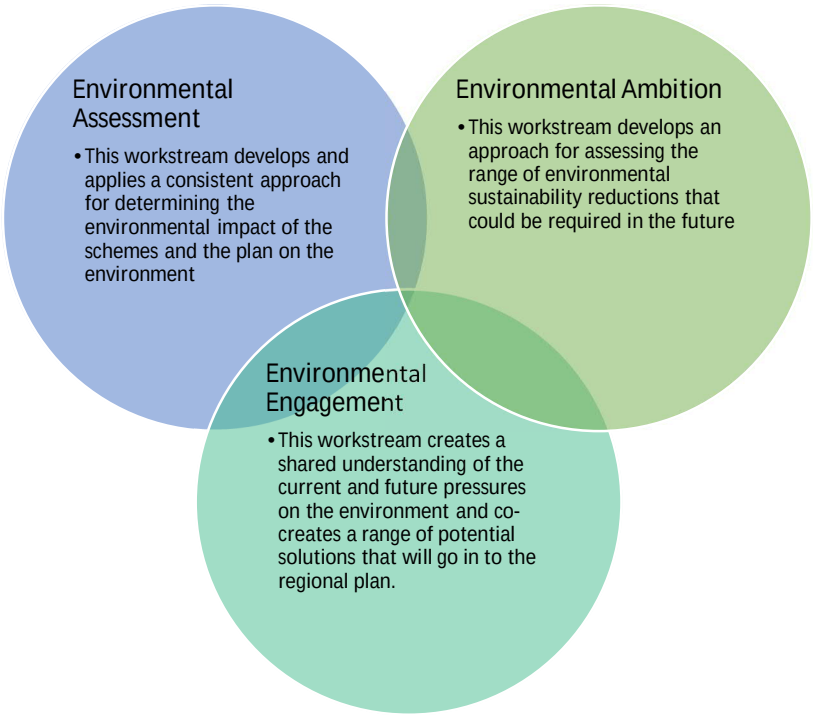
1 Method Statement

Background and purpose of statement

1.1 The Water Resources South East (WRSE) group is developing a regional resilience plan for the South East of England which will set out the long-term water needs for the region and the interventions required to address these needs. The need for regional plans is set out in the Environment Agency's Water Resources National Framework which explores the long-term needs of all sectors that depend on a secure supply of water. We have produced a series of Method Statements to explain the approach we are taking to develop the regional plan.

1.2 This Method Statement describes the approach to be taken to assess environmental effects in the development of the WRSE Regional Plan. The approach to environmental assessment is closely linked to two other environmental work streams in the WRSE work programme which are key to the development of the regional plan as shown in Figure 1 below; the environmental ambition and environmental engagement work streams - these are covered in more detail in Method Statement 1333 WRSE Environmental Ambition.

Figure 1: WRSE environmental workstreams



Development of methodology

1.3 Previously, environmental evaluation has predominantly been undertaken through the Strategic Environmental Assessment (SEA) process both at the level of individual water company water resources management plans (WRMPs) and through a combined and cumulative assessment undertaken on the regional plan. In addition, Water Framework Directive (WFD) assessments and Habitats Regulation Assessments (HRA), where necessary, have been undertaken by water companies as part of their options appraisal and selection processes for their plans and to ensure compliance with environmental legislation.

1.4 It was recognised that the development of an integrated resilience plan for the South East to meet the requirements of the Environment Agency's Water Resources National Framework would need to be informed through a bespoke environmental assessment approach that identifies both environmental impacts and opportunities. Recent government and regulatory publications have made it clear that companies are expected to maximise the wider social and environmental values delivered through provision of their services and therefore the approach needs to identify the opportunities afforded in this area through different alternative strategies.

1.5 A scoping study was initially commissioned by WRSE (WRSE Strategic Environmental Assessment Scoping Report) to review best practice in terms of understanding of SEA, Ecosystem Services and Natural Capital assessments in order to propose an initial environmental assessment framework. A review of available mechanisms for evaluating environmental and social value using literature searches was undertaken and in total 29 tools and approaches to environmental appraisal and valuation were reviewed. In addition, 13 organisations were interviewed to gather views on existing approaches and options for a new framework approach. The proposed framework was a step towards meeting stakeholder expectations, building on existing approaches but it presented challenges in terms of how it could be automated for the scale of assessment needed for the whole of the South East. Whilst the scoping study was being finalised in early 2020 new draft guidance emerged from the Environment Agency which also needed to be considered.

1.6 It became increasingly clear that an innovative and leading-edge environmental assessment approach was required given the emerging regulatory guidance and the significant water resources infrastructure that will be required to address the supply demand deficit in the region as set out in our publication Future water resource requirements for South East England (March 2020). The approach needs to be applied at a regional level but should also be flexible enough to be implemented at a sub-regional level. This involves providing a common source of readily accessible data that all water companies can use to support their planning. The focus is to develop a consistent approach for environmental assessment which incorporates environmental valuation techniques such as Biodiversity Net Gain (BNG), Natural Capital (NC) and ecosystem services assessment. The aim is to apply this across WRSE water companies so that wider environmental and social impacts and benefits can be consistently accounted for across the regional options in determining a best value resilient regional plan. In addition, it will incorporate climate change resilience through modelling of options.

1.7 WRSE subsequently commissioned the development of a new integrated environmental appraisal process to provide a consistent framework for environmental assessments for WRMP24. The method outlined in the WRSE Regional Plan Environmental Assessment Methodology Guidance (June 2020) has been

developed taking into account the new guidance from the Environment Agency and uses an integrated approach covering:

- Strategic Environmental Assessment (SEA)
- Habitats Regulations Assessment (HRA)
- Water Framework Directive (WFD) Assessment
- Natural Capital (NC) Assessment
- Biodiversity Net Gain (BNG)

1.8 The proposed environmental assessment process takes into account the following new and emerging guidance for water resources planning:

- Water Resources Planning Guideline (WRPG) February 2021 (Environment Agency, Natural Resources Wales, Ofwat)
- A Green Future: Our 25 Year Plan to Improve the Environment, DEFRA

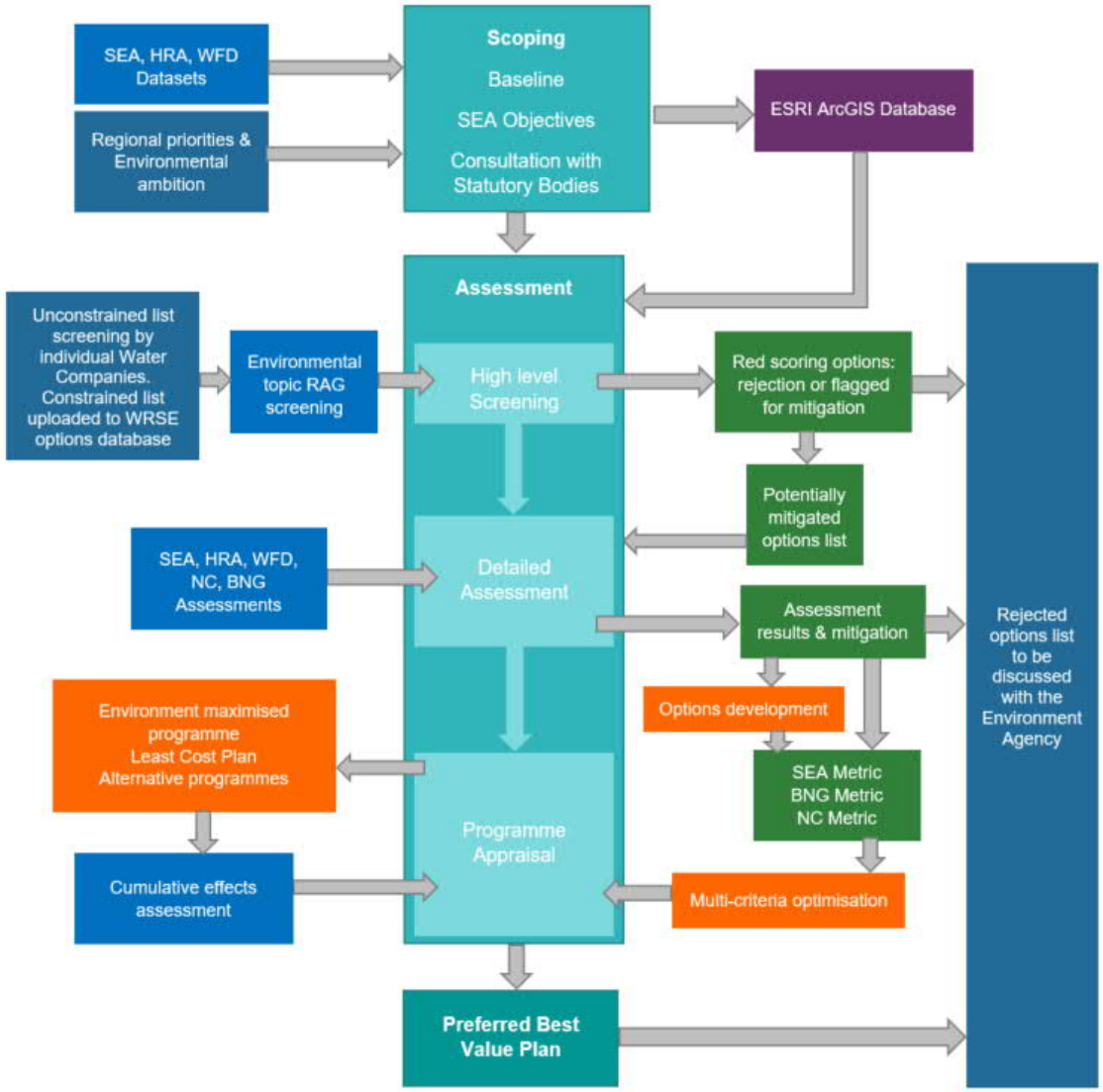
1.9 A review of the environmental and natural capital elements of the new water resources planning guidance and its alignment to the proposed environmental assessment approach for the WRSE Regional Plan has been undertaken and is presented in the Technical Note Review of Draft WRPG – Environmental and Natural Capital Review (May 2020).

1.10 A series of GIS tools for the environmental and ecosystem services assessments of the regional plan have been developed. The aim of these tools is to enable a more consistent and complex assessment of the individual options, improve the consistency between environmental assessment methods used by individual companies and provide a strong platform for WRSE to build on in the future. The GIS system is designed around existing ESRI applications and software such as ArcGIS dashboard and Arc online. The GIS system development focuses on three specific areas:

a. Enabling the environmental assessment and associated evaluation of a large number of options quickly and accurately to meet the programme requirements. This will also reduce the work needed by individual water companies when undertaking their own WRMP assessments.
b. The visualisation and analysis of individual option environmental impacts and the combined impact of the overall regional plan with the incorporation of climate change scenarios. This information will also inform the cumulative assessments of individual WRMP assessments.
c. Improving consistency across the individual assessment workstreams and between the water companies' environmental assessment techniques and providing environmental values that can be used when undertaking options appraisal. Thereby integrating the two processes.

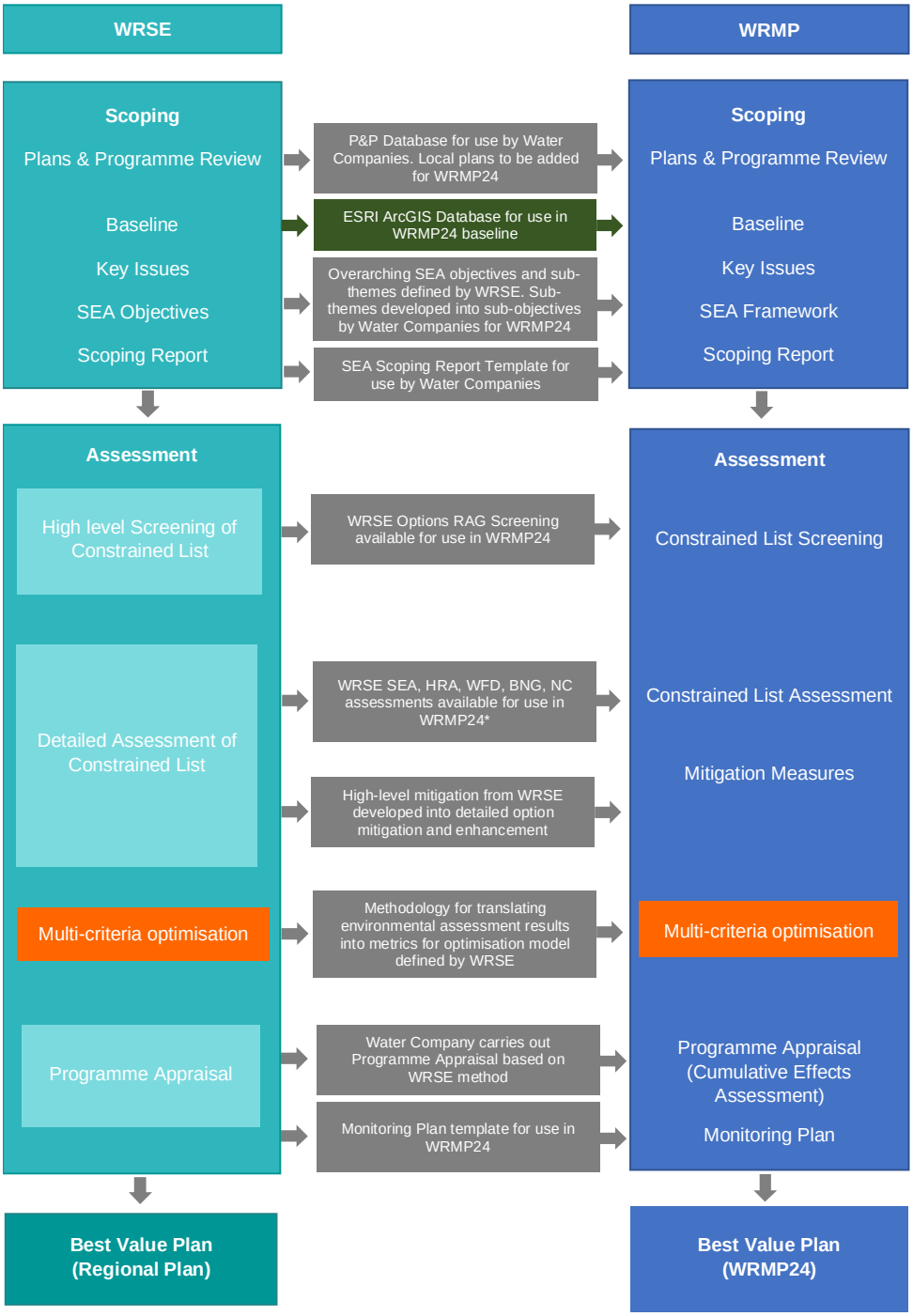
1.11 The approach to the environmental assessment methodology is presented in Figure 2 and is aligned to updated guidance from the Environment Agency. The figure shows the key interactions between the environmental appraisal and the options decision-making and plan development as part of an integrated and iterative process.

Figure 2: Environmental assessment approach



1.12 It is anticipated that the environmental assessment methodology will be used as a framework for water companies when undertaking their WRMP24 statutory environmental appraisals. A large amount of the supporting information required for WRMP24 will be produced as part of the regional plan environmental assessments which will be available for use by the individual water companies. Figure 3 shows the interactions and information that will be available from the regional plan environmental assessment to support the water company WRMP24 development process. The approach aims to reduce the amount of work individual water companies need to undertake during WRMP24, streamline the environmental assessment process, and ensure consistency across water company environmental assessments. Further information is included within the roles and responsibilities section below.

Figure 3 Relationship between WRSE and WRMP environmental appraisal processes



* Options would only need to be re-assessed by Water Companies if the option elements changed from those assessed as part of the regional plan, an unconstrained option was brought forward that wasn't on the regional plan constrained list, or additional local level baseline was included (this would only require re-assess of the relevant SEA objective)

Summary of proposed methodology

1.13 The WRSE Regional Plan Environmental Assessment Methodology Guidance sets out the approach in more detail and should be read in conjunction with this Method Statement. The guidance sets out the process as three steps covered as separate chapters:

- Stage 1 – Scoping
- Stage 2 – Assessment
- Stage 3 – Reporting and consultation

1.14 These steps build upon the established statutory SEA process by incorporating HRA, WFD assessments, Natural Capital assessments and Biodiversity Net Gain, whilst ensuring the formal requirements for an SEA are also met.

1.15 The scoping stage will include the review of all International, European, national, regional and local policies on the environment and sustainable development. The purpose of the plans and programme review is to ensure the WRSE environmental assessment supports wider environmental policy and objectives and legislation. A database of reviewed plans and legislation will be kept divided into policy level (e.g. International, national, local) and environmental topic (e.g. biodiversity, human health) and will be used primarily for WRSE however, it is anticipated that it could also be used by individual water companies for their WRMP24 SEA to streamline the plans and programme review process.

1.16 It is proposed to include the following themes for assessment of the regional plan within the SEA. The main themes, messages and objectives from the policies, plans and programmes review that are considered relevant to the WRSE regional plan are presented below. These are as follows:

- Conserve flora and fauna and their habitats
- Conservation and wise use of wetlands and their resources
- Protection of Habitat Sites
- Halt overall biodiversity loss
- Protection of landscape character and quality
- Improve water quality as set out in the Water Framework Directive
- Prevent or limit inputs of pollutants into groundwater and surface water
- Promote efficient use of water
- Reduce and manage the risks of flooding
- Reduce greenhouse gas emissions
- Adapt to the impacts of climate change
- Increase resource efficiency and reduce natural resource use and waste
- Promote social inclusion and community participation
- Protect cultural heritage assets including archaeology and built heritage
- Protect best quality soils and agricultural land

- Make space for water and wildlife along rivers and around wetlands
- Restore natural processes in river catchments, including in ways that support climate change adaptation and mitigation

1.17 In addition, the regional plan will support the UK Government's 25 Year Plan to Improve the Environment by:

- Using and managing land sustainably – including embedding a "biodiversity net gain" principle into development (as supported by the draft Environment Bill 26/05/2021).
- Recovering nature and enhancing the beauty of landscapes
- Connecting people to the environment to improve health and wellbeing
- Increase resource efficiency and reducing pollution
- Securing clean, healthy and productive and biologically diverse seas and oceans
- Protecting and improving the global environment

1.18 The themes and messages will be incorporated into SEA objectives which will provide an input into the process of identifying key issues and opportunities and for developing the SEA framework which will support development of the regional plan.

1.19 The scoping stage also includes the collection of baseline information that is required by Schedule 2 (2) of the SEA regulations. This is captured in an environmental database, with the spatial information held in an ESRI ArcGIS Environmental Database. The environmental database includes data required for the SEA, HRA and WFD assessments and any other data files required for other aspects of the assessment. The database is being developed for WRSE for the regional plan, however, it is anticipated that individual water companies will be able to use the database for their WRMP24 assessments and add additional local level data if required. A table showing the environmental datasets and their sources are provided in the WRSE Environmental Assessment Methodology Guidance and were downloaded in September 2020 for use in the assessment process.

1.20 The methodology recognises the importance of an evolving baseline without the implementation of the Regional Plan (as required by the SEA Directive and Regulations) and due to the long timescale of the Regional Plan period the baseline is likely to change, therefore, the future effects of the plan may change as well. One or two future time slices will be considered to cover the length of the plan period. These time slices will be agreed with WRSE and information such as climate projections and growth forecasts can be included to look at effects on the baseline.

1.21 It is proposed that an overarching set of SEA objectives are developed for WRSE. These will be linked to the SEA Directive topics and key priorities for WRSE and informed by the review of the six water companies' SEA objectives. These overarching objectives will be used to assess the WRSE regional plan using the environmental datasets. The overarching objectives could then be used as a framework for WRMP24 with sub-objectives chosen by each water company to reflect the issues and priorities in their areas.

1.22 The assessment will include the SEA, HRA, WFD, NC and BNG assessments. The SEA objectives on biodiversity, flora and fauna, and on water will be informed by the results of the HRA and WFD assessments, and an environmental metric covering all three will be developed to feed into options appraisal.

1.23 The assessment will be carried out on the options uploaded by the water companies in December 2020. Details of embedded mitigation will be included in the upload details and the detailed assessment will be based on this information. The methodology recognises that not all options will be developed to include mitigation which could lead to biases when translating results into metrics. Therefore, following the detailed assessment, the mitigation identified will be fed back to water companies to review and update their options for the March 2021 upload period.

1.24 The WRSE Regional Plan Environmental Assessment Methodology Guidance explains how the multi-criteria optimisation approach set out in the new Environment Agency guidance reflects the proposed approach for WRSE, where the outcomes of the environmental assessments are translated into metrics to feed into the multi-criteria optimisation for options selection and the programme appraisal. The results of the assessments will be translated into the metrics in line with the new Environment Agency guidance:

1.25 To generate the SEA metrics for each option, one for positive environmental effects and one for negative environmental effects, the assessment will include the effects generated by each potential option on the SEA Objectives (as developed during the scoping process and set out in the WRSE SEA Scoping Report):

- Biodiversity, Flora, Fauna: Protect and enhance biodiversity, priority species, vulnerable habitats and habitat connectivity (no loss and improve connectivity where possible), impacts on chalk rivers and the risk of the spread of invasive non-native species.
- Soil: Protect and enhance the functionality, quantity and quality of soils.
- Water: i) Increase resilience and reduce flood risk, ii) protect and enhance the quality of the water environment and iii) water resources and deliver reliable and resilient water supplies.
- Air: Reduce and minimise air emissions.
- Climate Factors: i) Reduce embodied and operational carbon emissions, and ii) reduce vulnerability to climate change risks and hazards.
- Landscape: Conserve, protect and enhance landscape, townscape and seascape character and visual amenity.
- Historic Environment: Conserve, protect and enhance the historic environment, including archaeology.
- Population and Human Health: i) Maintain and enhance the health and wellbeing of the local community, including economic and social wellbeing, and ii) maintain and enhance tourism and recreation.
- Material Assets: i) Minimise resource use and waste production, and ii) avoid negative effects on built assets and infrastructure.

1.26 The SEA metrics will include the results of the HRA and WFD assessments and have both positive and negative scores associated with an option. In addition, a score will be generated for biodiversity net gain (BNG) or required replacement which will be a percentage of habitat lost. The natural capital metric will be a monetised value.

1.27 Natural capital metrics will be generated using DEFRA, (2020) Enabling a Natural Capital Approach. The ecosystem services scoped in are those proposed by the current WRMP guidance the addition of recreation and amenity and food production, to assess the impact on natural capital, they include:

- Carbon sequestration (Climate regulation)
- Natural Hazard management
- Water purification * Quantitative
- Water Regulation
- Biodiversity and Habitats * Biodiversity net gain.
- Air pollutant removal
- Recreation & amenity value
- Food production

1.28 Biodiversity & Habitats will be assessed separately using a quantitative methodology (Defra 2.0). The provision of public water supply has been excluded from all assessments to avoid potential double accounting of benefits within the multi-criteria optimisation. The value of leaving the water in the environment and the benefit this will provide to biodiversity, and other current and future abstractors, will be assessed through the WRSE environmental ambition work package.

1.29 During the assessment process when metrics are being generated there will be continuous review by water companies to ensure the assessments reflect the current understanding of the option and the associated environmental sensitivities.

1.30 The Regional Plan SEA will include proposed mitigation and will develop a programme of monitoring of significant environmental effects of the plan's implementation with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action. In accordance with the SEA Regulations monitoring arrangements may comprise or include arrangements established for other purposes. This is of particular relevance to water reuse schemes where water quality and quantity is a key component to the maintenance of healthy ecosystems. The effectiveness of options where mitigation is key to their adoption in the regional plan would also be candidates for a monitoring regime.

1.31 A proof of concept (PoC) assessment of the environmental assessment methodology has been undertaken on four different types of options to demonstrate its applicability. The WRSE Proof of Environmental Assessment Concept Overview Document (June 2020, not yet in the public domain) shows how each of the five environmental assessment approaches have been applied to the four options. The assessment has successfully demonstrated how the approach can be applied and has made some recommendations for improving the approach which have been taken into account.

1.32 Stakeholder engagement is a key part of the environmental assessment process. The WRSE Project Management Board (PMB) has an environment sub-group where consultation with water company specialists and appropriate statutory bodies is undertaken. Further details can be found in Method Statement 1327 WRSE Stakeholder Engagement.

Roles and responsibilities

1.33 The WRSE PMB has nominated technical leads for each work stream which makes up the programme of work to develop the regional resilience plan. The PMB technical lead for the environmental aspects of the plan is responsible for ensuring the work stream delivers against the regional plan work programme. The PMB technical lead is also responsible for ensuring PMB is kept informed of progress through liaison with the programme manager and the WRSE PMB environment sub-group.

1.34 A programme manager for the environment work stream has been appointed to manage the various tasks within the workstream and ensure it is integrated with other workstreams within the overall regional plan programme. The programme manager will liaise directly with suppliers who are delivering each task in the workstream.

1.35 A WRSE PMB environment sub-group has been formed to report to the WRSE PMB via the WRSE PMB environment technical lead. This sub-group consists of environmental specialists and managers in each water company and the Environment Agency to ensure environmental technical specialists are contributing their expertise to the development and application of the environmental assessment approach.

1.36 In order to support the environmental assessment aspects of the regional plan and their own WRMPs, water companies will be responsible for:

a. Collection, analysis and presentation of locally relevant plans and programmes to supplement the WRSE plans and programmes database.
b. Collection, analysis and presentation of local baseline information to supplement the environmental datasets defined under the SEA topics.
c. Identification, development and/or selection of local relevant assessment sub-objectives to provide a tailored assessment.
d. Completion of an SEA for WRMP24.
e. Completion of a separate HRA assessment for WRMP24, as it will be the responsibility of the water company, as the plan author, to ensure Habitat Regulation requirements have been met, when publishing the final plan.
f. Completion of a separate WFD assessment for WRMP24, as it will be the responsibility of the water company, as the plan author, to ensure WFD requirements have been met, when publishing the final plan.
g. Completion of a separate NCA of the WRMP24 options, in order to meet the requirements of the EA guidance.

Timeline and outputs

1.37 The proposed key milestones in the environmental assessment approach are set out below.

- Milestone 1: End August 2020 – Submission of Scoping Report for consultation period.
- Milestone 2: End of 2020 - Options full environmental assessments completed and option metrics ready for upload to investment model for the test run in January 2021. Mitigation from assessments fed back to water companies.
- Milestone 3: March 2021 – Second upload of options information by water companies. Review of assessment scoring and translation of results into final metrics for the investment model.
- Milestone 4: April – July 2021 – Programme appraisal. This is dependent on the timing of the outputs of the investment model. The programmes of options from the investment model will be needed to undertake the environmental programme appraisal. Following this the chosen best value plan will undergo assessment.
- Milestone 5: December 2021 - Environmental Report submission for emerging regional plan consultation period.
- Milestone 6: November 2022 – Finalise Environmental Report for draft regional plan.
- Milestone 7: August 2023 - SEA Post-Adoption Statement.

2 Summary

2.1 This Method Statement describes the approach to be taken to assess environmental effects in the development of the regional plan. The approach to environmental assessment is closely linked to two other environmental workstreams in the WRSE work programme which are key to the development of the regional plan – the environmental ambition and environmental engagement workstreams.

2.2 The approach outlined in this Method Statement has been developed to meet the specific requirements of new guidance for WRMP24 and to ensure that a consistent approach can be applied at the scale of the regional plan as well as individual company WRMPs. This Method Statement summarises the WRSE Regional Plan Environmental Assessment Methodology Guidance (June 2020) which takes into account the new guidance from the Environment Agency and uses an integrated approach covering Strategic Environmental Assessment (SEA), Habitats Regulations Assessment (HRA), Water Framework Directive (WFD) Assessment, Natural Capital (NC) Assessment and Biodiversity Net Gain (BNG).

2.3 This Method Statement should be read in conjunction with Method Statement 1333 WRSE Environmental Ambition which considers the long term aims for enhancing the environment, and Method Statement 1328 WRSE Options Appraisal and Method Statement 1318 WRSE Best Value Planning given the important role of environmental assessment on options appraisal and the selection of a best value resilience plan.

2.4 As we continue to develop the regional plan we might revise the approach in order to respond to updated regulatory guidance.

3 Next steps

3.1 An initial version of this document was consulted upon between 1st August 2020 to 30th October 2020 and comments received during this time have been incorporated in this version.

3.2 We have also reviewed this document against the final WRPG and supplementary guidance notes issued by the regulators.

3.3 If any other further relevant guidance notes or policies are issued, then we will review this Method Statement to see if it needs to be updated.

3.4 When we have finalised our Method Statement, we will ensure that we explain any changes we have made and publish an updated Method Statement on our website.